

APPENDIX A

Notice of Preparation/Initial Study and Scoping Comments

DEPARTMENT OF WATER RESOURCES

3310 El Camino Avenue, Suite 100
SACRAMENTO, CA 95821
(916) 574-1302



Notice of Preparation of an Environmental Impact Report
and Initial Study

Small Erosion Repair Program

November 25, 2009

Prepared by:
California Department of Water Resources
Division of Flood Management
Flood Maintenance Office
3310 El Camino Avenue, Suite 100
Sacramento, California 95821

DEPARTMENT OF WATER RESOURCES

3310 El Camino Avenue, Suite 100
SACRAMENTO, CA 95821
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**NOTICE OF AVAILABILITY OF A DRAFT NOTICE OF PREPARATION/
INITIAL STUDY FOR PUBLIC REVIEW**

California Department of Water Resources (DWR), Division of Flood Management has released a Notice of Preparation/Initial Study (NOP/IS) for the project listed below:

PROPOSED PROJECT: Small Erosion Repair Program (SERP) for Sites on Levees within the Sacramento River Flood Control Project Area

PUBLIC COMMENT AND REVIEW PERIOD: November 25, 2009 – December 28, 2009

PROJECT DESCRIPTION: The SERP would provide a streamlined program for DWR to identify, obtain regulatory authorization for, and construct small levee repairs on levees maintained by DWR within the Sacramento River Flood Control Project (SRFCP) area. The initial focus (Phase 1) of the SERP approximately 306 miles of levees and represents an initial 5-year effort. After the Phase 1 implementation period, the Interagency Flood Management Collaborative Program Group (Interagency Collaborative Group) intends to evaluate the program's success and, if warranted, the SERP may be expanded in the future to include sites repaired by the local maintaining agencies throughout the Sacramento-San Joaquin drainage district. The EIR will review environmental effects only for the Phase 1 coverage area.

Implementation of SERP would include DWR maintenance staff conducting annual maintenance surveys each spring to identify small erosion sites for repair within the Phase 1 SERP coverage area. DWR engineering and environmental staff would conduct a baseline assessment at each site.

A maximum of 15 individual repair projects would be implemented annually under the SERP during Phase 1 of the program. Individual repair sites are defined generally as the footprint of new materials to protect a levee bank and additional vegetated area that would be disturbed by equipment during construction, including staging and access routes.

Potential SERP repairs would be categorized into two tiers based on the size of the project disturbance area. A site would be designated "Tier 1" if the footprint of new bank protection materials and construction disturbance area is 0.1 acre or less with a maximum linear footprint of 264 feet. A minimum separation of 500 feet would be required between repairs. A site would be designated "Tier 2" if the footprint of new bank protection materials and construction disturbance area is up to 0.5 acre with a maximum linear footprint of 1,000 feet. Repairs larger than 0.5 acre or 1,000 linear feet would require individual consultation and environmental review and thus would not qualify for authorization under the SERP.

SIGNIFICANT ENVIRONMENTAL EFFECTS ANTICIPATED: The NOP/IS identified potentially significant effects associated with: air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, and noise. These issue areas will be discussed further in the draft Environmental Impact Report (EIR) for the proposed program, and mitigation

measures will be recommended wherever feasible to reduce potentially significant and significant impacts.

WHERE NOP/IS MAY BE OBTAINED: Copies of the NOP/IS are available for viewing at the following locations during business hours or library hours:

California Department of Water Resources
Division of Flood Management
3310 El Camino Avenue, Suite 100
Sacramento, CA 95821

Sacramento Public Library, Central Library
828 I Street
Sacramento, CA 95814

Chico Branch Library
1108 Sherman Avenue
Chico, CA 95926

Comments on the proposed program or the focus and contents of the upcoming draft EIR must be submitted in writing to:

California Department of Water Resources
Division of Flood Management
3310 El Camino Avenue, Suite 100
Sacramento, CA 95821
Attention: Jeff Schuette, Staff Environmental Scientist
E-mail: jschuett@water.ca.gov

Comments must be received by **5:00 p.m. on December 28, 2009**. To account for the holiday schedule, the comment period is being extended from the required 30 days to end on December 28.

SCOPING MEETING: A scoping meeting will be held to receive written and oral input on the scope and content of the draft EIR. The scoping meeting will be held on **December 15, 2009**, at **1:30 p.m.** at the following location:

California Department of Water Resources
Division of Flood Management
3310 El Camino Avenue
Sacramento, CA 95821

All comments received during the public review period, including oral comments made at the scoping meeting, will be made part of the public record. At the conclusion of the 30-day comment period a draft EIR will be prepared that will address comments received during the review period.

NOTICE OF PREPARATION OF AN EIR

To: Agencies and Interested Parties

From: Jeff Schuette, Staff Environmental Scientist, Division of Flood Management,
California Department of Water Resources

Date: November 25, 2009

Subject: Notice of Preparation of an Environmental Impact Report on the Small Erosion Repair Program (SERP) for Sites on Levees within the Sacramento River Flood Control Project Area

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.), the California Department of Water Resources (DWR) will be preparing an environmental impact report (EIR). The EIR will evaluate the environmental effects associated with the Small Erosion Repair Program (SERP) that would facilitate an initial focus of implementing repairs of small erosion sites on levees maintained by DWR within the Sacramento River Flood Control Project (SRFCP) area. The SERP may be expanded in the future to include sites repaired by the local maintaining agencies throughout the Sacramento-San Joaquin drainage district.

In accordance with Section 15082 of the State CEQA Guidelines, DWR has prepared this notice of preparation (NOP) as notification that a programmatic EIR will be prepared. The purpose of an NOP is to provide sufficient information about the proposed program and its potential environmental impacts so that the State of California's Office of Planning and Research (OPR), responsible and trustee agencies, and interested parties have the opportunity to provide meaningful comments related to the scope and content of the EIR, including the significant environmental issues, reasonable alternatives, and mitigation measures that the responsible or trustee agency, or OPR, will need to explore in the EIR (State CEQA Guidelines Section 15082[b]).

A brief description of the proposed program and its location, along with a listing of environmental effects that may occur under the proposed program, are contained in the attached materials. An initial study, attached hereto, has been prepared in accordance with State CEQA Guidelines Section 15063 and identifies the anticipated environmental effects of the program. The initial study satisfies DWR's obligation under State CEQA Guidelines Section 15082, subdivision (a)(1)(C), to identify the "probable environmental effects of the project."

Responses to this NOP must be sent no later than **5 p.m. on December 28, 2009**. CEQA requires that public comments be accepted for 30 days after receipt of this notice (State CEQA Guidelines, Section 15082 [b]); however, to account for the holiday

schedule, the comment period is being extended to December 28. If you wish to comment on the proposed program or the focus and contents of the upcoming draft EIR, please send your written comments to:

California Department of Water Resources
Division of Flood Management
3310 El Camino Avenue, Suite 100
Sacramento, CA 95821
Attention: Jeff Schuette, Staff Environmental Scientist
E-mail: jschuett@water.ca.gov

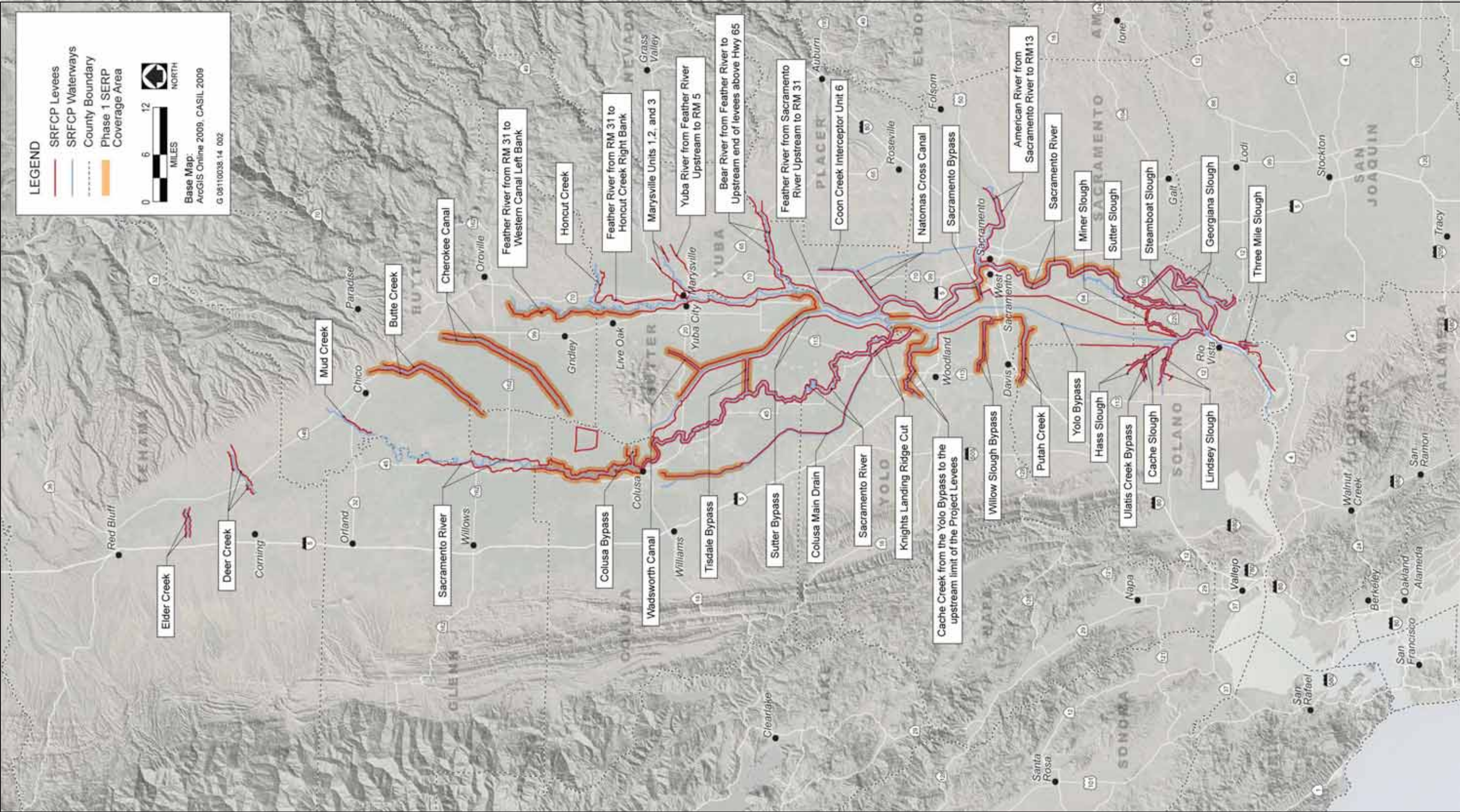
A scoping meeting will be held to receive written and oral input on the scope and content of the EIR. The scoping meeting will be held on December 15, 2009, at 1:30 p.m. at the following location:

California Department of Water Resources
Division of Flood Management
3310 El Camino Avenue
Sacramento, CA 95821

PROGRAM LOCATION

The SERP would provide a streamlined program for DWR to identify, obtain regulatory authorization for, and construct small levee repairs on levees maintained by DWR within the SRFCP area. The initial focus (Phase 1) of the SERP represents approximately 306 miles of levees (Exhibit 1, "Phase 1 SERP Coverage Area") and represents an initial 5-year effort. After the Phase 1 implementation period, the Interagency Flood Management Collaborative Program Group (Interagency Collaborative Group) intends to evaluate the program's success and, if warranted, the SERP may be expanded in the future to include sites repaired by the local maintaining agencies throughout the Sacramento-San Joaquin drainage district. The EIR will review environmental effects only for the Phase 1 coverage area.

The Sacramento River's hydrology has been altered by dam, weir, and levee construction. The flood control facilities that DWR maintains are located within the valley floor of the watershed. The valley drainages include the upper Colusa and Cache Creek watersheds on the west side of the valley and the Feather River and American River watersheds on the east side of the valley (SVWQC 2004, p. 1). DWR's maintenance yards maintain the levees along the waterways listed below, all of which would be eligible for inclusion in the SERP (See Exhibit 1, "Phase 1 SERP Coverage Area"). It should be noted that the term "levees" as used in this document is broadly defined to include levees and associated waterside slopes within the levee prism that are part of the flood control system and addressed in operations and maintenance manuals for identified flood control facilities maintained by DWR or other local maintaining agencies. Only the waterways identified in the Phase 1 waterways section below are included in the SERP for Phase 1. After Phase 1 of the program the Interagency Collaborative Group intends to evaluate the program's success, whereby the SERP may be expanded



Source: Adapted by AECOM in 2009

Phase 1 Small Erosion Repair Program Coverage Area

Exhibit 1

in the future to include sites repaired by the local maintaining agencies throughout the Sacramento-San Joaquin drainage district.

Phase 1 Waterways:

- ▶ Butte Creek
- ▶ Cache Creek from the Yolo Bypass to the upstream limit of the SRFCP levees
- ▶ Cherokee Canal
- ▶ Colusa Bypass
- ▶ Northern portion of Colusa Main Drain as identified in Exhibit 1
- ▶ Portions of Feather River as identified in Exhibit 1
- ▶ Putah Creek
- ▶ Sacramento Bypass
- ▶ Portions of Sacramento River as identified in Exhibit 1
- ▶ Sutter Bypass
- ▶ Tisdale Bypass
- ▶ Wadsworth Canal
- ▶ Willow Slough Bypass
- ▶ Portions of Yolo Bypass as identified in Exhibit 1

Waterways covered under the expanded SERP coverage area could include the rest of the SRFCP area and the San Joaquin River included in the Sacramento-San Joaquin Drainage District.

PROGRAM BACKGROUND AND NEED

Levees that sustain erosion damage during winter periods of high flows may undergo further loss of soil or potential failure over time that could lead to levee failure and significant adverse effects on the surrounding fish and wildlife resources. Such erosion sites need to be repaired in a timely manner to maintain the flood control integrity of the existing flood management system and to repair, maintain, or enhance environmental conditions at the site. Currently, small erosion repair projects require issuance of permits on a project-by-project basis. The multiple authorizations and level of interagency coordination required for individual repairs (e.g., Clean Water Act permits from the U.S. Army Corps of Engineers [USACE]; Endangered Species Act compliance with U.S. Fish and Wildlife Service [USFWS]; and National Marine Fisheries Service [NMFS]; streambed alteration agreements from the California Department of Fish and Game [DFG]; water quality certification with the local regional water quality control board [RWQCB]) has often resulted in delays, during which time the eroded areas have been susceptible to further damage and loss of riparian vegetation, posing a potential public safety hazard.

To address this problem, the SERP subcommittee was formed at the direction of the Interagency Collaborative Group on January 17, 2007. The SERP subcommittee is a group of federal and state resource agency representatives charged with defining what constitutes a small erosion repair and determining appropriate repair techniques that will adequately protect the levee system while avoiding substantial adverse effects on

environmental resources. The SERP subcommittee has worked in concert to craft a program intended to improve current erosion repair practices and thus achieve a cumulative net benefit to fish and wildlife resources and habitat for native species while maintaining the necessary level of flood protection.

PROGRAM OBJECTIVES

The purpose of the SERP is to ensure the continued flood control integrity of the SRFCP levees while protecting environmental resources by providing an efficient method of selecting, evaluating, and permitting small erosion repair projects. The SERP would use programmatic authorizations issued by federal, state, and local regulatory agencies to streamline the process for implementing small erosion repairs in accordance with conservation strategy-based design and monitoring standards established by the SERP subcommittee. Repairs that qualify under the SERP would be eligible to receive authorization to proceed within a shortened time frame because they are designed to minimize effects on fish and wildlife resources, including listed species, and to protect and enhance the existing aquatic and riparian habitats comprising the riverine corridor.

The program sets apart similar small erosion repair sites and develops a streamlined permitting process for these sites with the following goals:

- ▶ Provide for a quicker response to small erosion sites, thereby preventing the erosion from expanding.
- ▶ Foster consistent regulatory compliance efforts for similar repairs, from the standpoint of both environmental protection and operations and maintenance activities.
- ▶ Develop a comprehensive approach to facilitate program-level review of small erosion sites and streamline permitting.
- ▶ Obtain measurable data with which to evaluate the success of the program through an ongoing, consistently applied monitoring effort.

The identified objectives of the SERP are to:

- (1) maintain the flood control integrity of the SRFCP,
- (2) prevent further erosion so that the loss of riparian and nearshore aquatic habitat is less likely to occur,
- (3) minimize the loss of riparian vegetation and endangered species habitat resulting from construction activities, and
- (4) enhance the existing riparian vegetation corridor at the erosion sites, where applicable.

PROGRAM DESCRIPTION

DWR is proposing to develop and implement a collaborative program to improve current erosion repair practices and thus achieve a greater level of flood protection while providing a cumulative net benefit to fish and wildlife resources and habitat for native species. As part of the program, DWR and the SERP subcommittee of the Interagency Collaborative Group are developing the SERP Manual, which describes the various elements of the program. Programmatic permits and project approvals are being requested from USACE, USFWS, NMFS, DFG, and the Central Valley RWQCB.

SERP PROJECT IDENTIFICATION AND IMPLEMENTATION PROCESS

Project Identification and Characterization

Implementation of SERP would include DWR maintenance staff conducting annual maintenance surveys each spring to identify small erosion sites for repair within the Phase 1 SERP coverage area. DWR engineering and environmental staff would conduct a baseline assessment at each site.

A maximum of 15 individual repair projects would be implemented annually under the SERP during Phase 1 of the program. Individual repair sites are defined generally as the footprint of new materials to protect a levee bank and additional vegetated area that would be disturbed by equipment during construction, including staging and access routes.

Potential SERP repairs would be categorized into two tiers based on the size of the project disturbance area. A site would be designated “Tier 1” if the footprint of new bank protection materials and construction disturbance area is 0.1 acre or less with a maximum linear footprint of 264 feet. A minimum separation of 500 feet would be required between repairs. A site would be designated “Tier 2” if the footprint of new bank protection materials and construction disturbance area is up to 0.5 acre with a maximum linear footprint of 1,000 feet. Repairs larger than 0.5 acre or 1,000 linear feet would require individual consultation and environmental review and thus would not qualify for authorization under the SERP.

For each proposed site, DWR would identify the appropriate SERP design template to apply to the site. The program design templates are described in more detail below.

DWR would notify the applicable permitting agencies— USACE, USFWS, NMFS, DFG, and RWQCB—of the proposed small erosion repair projects by bundling and submitting all of the required notification materials for up to 15 projects to the agencies as a package each spring. The notification packet would include documentation that each site is consistent with the findings and parameters of the CEQA document prepared for the SERP. Upon receipt of the annual SERP notification package, the agencies would review the projects and respond to DWR within 30 days with written response of whether the projects are acceptable under the programmatic SERP authorizations, including any additional terms or conditions for approval in their response. Upon receiving the agencies’ verification of SERP authorization, DWR may proceed with the

repairs in accordance with the applicable conservation measures and best management practices (BMPs). This process would thereby result in a considerably shortened permitting time frame for those projects qualifying for SERP authorization, allowing the necessary repairs to be implemented in a timely manner while fully considering and protecting environmental resources.

To ensure SERP repairs are unconnected single and complete actions and not part of a larger action that would exceed the SERP size and placement limits (several small repairs becoming one large repair), each project must demonstrate independent utility. A SERP repair would have independent utility if it would be a useful and reasonable expenditure if constructed absent the construction of other projects in the coverage area.

Each repair would also be entered into a GIS database developed by DWR to enable tracking of cumulative SERP effects. The database would be made available to the agencies involved.

Site Repairs

Construction Process and Staging, Sequencing, and Equipment

Construction activities would take place at individual sites throughout the summer and fall. Each site would require no more than 2 weeks of active construction, not including revegetation (e.g., willow stakes). All work would take place during daylight hours, and no nighttime lighting would be required. Equipment used during construction may include the following:

- ▶ large bulldozer(s),
- ▶ trucks,
- ▶ small bulldozer(s),
- ▶ barge, and
- ▶ excavator.

Revetment would be placed from cranes mounted on barges or, in locations where this is not possible, from adjacent landside areas using excavators. Waterside construction would occur where it minimizes noise, traffic, and vegetation disturbances. The construction contractor (in Phase 1, this would always be the DWR maintenance yards) would use adjacent landside areas, maintenance toe roads, or the crown roads for staging of vehicles, plant materials, and other associated construction equipment, as necessary.

Bank reconstruction would incorporate plantings into the revetment in accordance with the bioengineering techniques outlined in the program design templates (Appendix A). The upper bank may also be hydroseeded and covered with biodegradable materials to control erosion and stabilize the bank while plantings become established. Willow cuttings and other native vegetation would be installed during placement of the revetment or after construction during the appropriate planting season. Precise planting

timelines would be determined upon the availability of planting materials and in coordination with relevant SERP-authorizing agencies.

Maintenance

The templates have been designed with the intent that once repaired, the erosion sites would require limited maintenance. The limited maintenance may include removing invasive vegetation detrimental to project success. DWR intends to monitor individual sites for 5 years.

PROGRAM ELEMENTS

As stated above, the SERP is being developed through the Interagency Collaborative Group and, more directly, through more than 2 years of meetings and collaboration by the SERP Subcommittee. The SERP subcommittee is currently developing the SERP Manual, which will provide the general guidelines under which the program will operate. The SERP subcommittee is developing guidelines in several areas such as project design, conservation measures, and monitoring and reporting requirements to ensure that, for each project site, DWR complies with all applicable federal, state, and local regulations. Because sections of the SERP Manual are in development, the sections below provide the best available information about the content of each section at the time this NOP is being prepared. More complete information will be provided about each section in the draft EIR.

The SERP is intended to be a self-mitigating program and individual projects would be allowed to move forward under programmatic permit conditions following agency review and approval of the annual project notification packages.

Design Alternatives

To maintain the SRFCP levee system, erosion repairs are needed on a continual basis. The SERP subcommittee discussed a dozen repair alternatives and decided that the SERP would utilize seven design templates:

1. Bank fill rock slope with live pole planting
2. Willow wattle with rock toe
3. Branch layering
4. Rock toe with live pole planting
5. Soil and rock fill at the base of a fallen tree
6. Bank fill rock slope with grasses (in development)
7. Low slope with tule plantings (in development)

Draft versions of the seven design templates are included in Appendix A of this NOP; Design Templates 6 and 7 are still in development, and text descriptions will be provided for them in the EIR.

A site-specific cross section, plan view, and planting plan/vegetation species list would be developed for each SERP project based on the design template selected for the repair. This information would be provided to the agencies along with the project

notification materials in the annual SERP notification packages. The project design plans would be prepared as a coordinated effort by DWR maintenance, engineering and environmental staff, and would show plan view details (e.g., spacing, location, depth). Minor changes to the program design templates may be recommended for specific projects based on detailed knowledge of the sites.

Monitoring and Success Criteria

Monitoring and reporting requirements and success criteria for SERP projects will be developed by the SERP subcommittee and presented in the SERP Manual. Monitoring of individual sites for a minimum 5-year period is anticipated.

The annual monitoring reports would include an evaluation of project success in meeting the established performance criteria and a protocol for implementing remedial actions should any success criteria not be met.

Annual monitoring reports that evaluate how the site meets the success criteria would be submitted to the regulatory agencies each year. Pre and postconstruction site visits from regulatory agency personnel may occur at any time to determine the effectiveness of this program and whether contingency actions and/or adjustments to the established success criteria should be made.

Conservation Measures

General conservation measures are being developed in coordination with the agencies represented on the SERP subcommittee. As part of the project notification materials, DWR would select and include a list of those conservation measures that are applicable to a specific location, and the agencies would have an opportunity to revise the list for each project. Species-specific conservation measures are also being developed by the SERP Subcommittee for the following species and habitats:

- ▶ Giant garter snake habitat
- ▶ Valley elderberry longhorn beetle
- ▶ Delta smelt
- ▶ Salmonids
- ▶ Bank swallow
- ▶ Raptors

POTENTIAL ENVIRONMENTAL IMPACTS

The draft EIR will be focused on several potentially significant environmental impacts associated with implementation of the proposed project. Mitigation measures will be recommended wherever feasible to reduce potentially significant and significant impacts. The attached initial study checklist discusses issue areas that will not be carried forward for further analysis in the draft EIR. Issues to be addressed in the focused EIR are air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, and noise, as discussed below.

- ▶ **Air Quality:** Implementation of the proposed program would result in little to no operational emissions that could degrade air quality. However, during construction of the erosion repairs trucks would be required to haul materials to the sites, construction workers would commute to the sites, and construction equipment would be needed to perform the work, which would increase emissions of various criteria air pollutants.
- ▶ **Biological Resources:** Sensitive resources, including special-status species and riparian habitats occur along levees and banks within the coverage area could be affected during project construction.
- ▶ **Cultural Resources:** Implementation of the proposed program would include construction, excavation, and earth moving that could disturb known or undiscovered cultural resources.
- ▶ **Geology and Soils:** Construction of the erosion repair projects could result in increased erosion or could be located on expansive or unstable soils.
- ▶ **Hydrology and Water Quality:** The proposed program would require work within the floodplain, could have an effect (although likely beneficial) on flood hazards, and could result in water quality impacts during construction.
- ▶ **Noise:** Construction activities under the proposed program could involve pieces of heavy equipment and multiple trips by haul trucks, potentially resulting in increases in ambient noise levels and exceedances of local noise standards.

ALTERNATIVES

Consistent with the requirements of State CEQA Guidelines Section 15126.6, the draft EIR will examine a range of reasonable alternatives to the proposed project that are potentially feasible. The alternatives must feasibly attain most of the project objectives of the proposed program while also avoiding or substantially lessening at least one of the significant environmental effects of the proposed project. CEQA does not require alternatives to be evaluated at the same level of detail as the proposed project (State CEQA Guidelines Section 15126.6[d]). As a result of scoping and agency consultation efforts conducted to date, the alternatives currently proposed for evaluation in the draft EIR include:

- ▶ **No-Project Alternative:** CEQA requires analysis of a No-Project Alternative (State CEQA Guidelines 15126.6[e]). This alternative is essentially the “status quo” alternative; the SERP would not be initiated, and no collaborative programmatic repair program would be put in place by DWR. Instead, erosion repairs would continue to be identified by DWR, permitted individually by the applicable regulatory agencies, and implemented when permits have been obtained.
- ▶ **Traditional Engineered Repairs Alternative:** This alternative would include development and implementation of a streamlined programmatic repair program.

Rather than emphasizing a repair approach that would achieve a cumulative net benefit to fish and wildlife resources and habitat for native species, this alternative would rely on an approach to implement repairs and maintain the necessary level of flood management using traditional engineering techniques. Compensatory mitigation required with this alternative would be implemented off-site.

- **Large-scale Erosion Repair Alternative:** This alternative would propose a collaborative programmatic repair program that would be limited to larger projects than those deemed eligible under the SERP. This program would allow DWR to streamline some permit reviews; however, because USFWS and NMFS would not allow approval of a programmatic biological opinion for projects larger than the Tier 2 project size identified under the SERP, each project site would require individual review and permitting under Section 7 of the ESA.

One of the purposes of the NOP is to solicit input from responsible and trustee agencies and the public and interested organizations regarding potential alternatives to the proposed program. Therefore, DWR welcomes comments during the public scoping process regarding these alternatives or suggestions for other alternatives to be examined in the draft EIR.

SUBMISSION OF COMMENTS

To ensure that the full range of program issues of interest to responsible and trustee agencies and the public are addressed, comments and suggestions are invited from all interested parties. Written comments or questions concerning the scope of the draft EIR should be directed to DWR at the address provided on the first page of this NOP by **5:00 p.m. on December 28, 2009**. To account for the holiday schedule, the comment period is being extended from the required 30 days to end on December 28. Please provide the name and address of a contact person who should receive future correspondence regarding the project.

ENVIRONMENTAL CHECKLIST

AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The Phase 1 SERP coverage area includes the levees and banks of the Sacramento River and its tributary streams and channels, in the Sacramento Valley (Exhibit 1). These waterways are generally characterized by a streambed confined between constructed levees, which are lined with a narrow corridor of riparian vegetation. The riparian corridor varies in width and can be dense and extensive in some locations along the rivers, especially north of Sacramento where the rivers meander. To the south as these rivers become more confined by levees, riparian vegetation is less dense to nonexistent. The character of the riparian vegetation varies from an open to dense, broadleafed, streamside willow scrub community to dense, broadleafed, forest communities (Great Valley Cottonwood Forest, Great Valley Mixed Riparian Forest, and Great Valley Oak Riparian Forest). The riparian corridors provide moderate- to high-quality scenic views; however, the waterside of the levees is not generally visible from the landside. Adjacent lands include agricultural, rural, and urbanized areas, some of which are developed with commercial, industrial, recreational, or residential uses. Viewer groups of the waterside of the levee consist of residents living near the rivers or on the waterside of the levees; recreational river users (boating and fishing); visitors to

state and local parks and recreational facilities located on or adjacent to the river levees; motorists using roadways that are located on the levees or that cross the levees on bridges, and recreational users of bicycle and walking paths located on the levees. The only officially designated state scenic highway within the Phase 1 SERP coverage area is State Route (SR) 160, which extends along the Sacramento River between the City of Sacramento and the Contra Costa County line.

DISCUSSION

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less than Significant. The repair sites would be a maximum of 0.5 acre of disturbed area and would be no longer than 1,000 linear feet. In any given year, adjacent repair sites or sites with recent repairs could be located no closer than 500 feet to one another. Larger sites would not be part of SERP. The erosion repair design templates, described in the NOP and depicted in Appendix A, would include vegetation plans designed through collaborative efforts between environmental scientists, landscape architects, DWR engineers, and resource agency staff. The repairs would not have a significant impact on any scenic vistas because of the small size of the repair sites, the limited visibility of the sites from adjacent landside areas, and the incorporation of revegetation plans for disturbed areas as part of the design. This impact would be less than significant; no mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant. The only scenic highway that could potentially have views of erosion repair sites would be SR 160. However, the repair sites would be small, would be located on the waterside of the levees, and would be similar in character to the existing levees and repair sites. Because the size of the sites would be small and not result in substantial changes to the visual character of the Phase 1 SERP coverage area, the erosion repair work would not have a significant adverse impact on scenic resources visible from roadways, including state scenic highways. This impact would be less than significant; no mitigation is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant. The SERP would not degrade the existing visual character or quality of the repair sites or surroundings because the size of the repair sites would be small and because revegetation plans for disturbed areas would be part of the design. The purpose of the SERP is to repair small areas of erosion damage before they can become larger; sites would be restored to their pre-repair condition or habitat would be enhanced where appropriate. Neither construction activities nor the repaired sites would

degrade the existing visual character or quality of the site and its surroundings. This impact would be less than significant; no mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant. All erosion repair work under the SERP would take place during daylight hours; therefore, no lighting would be used. Equipment used during the repairs may create some glare; however, because this would be a temporary effect (on the order of 1–2 weeks) and the amount of equipment needed would be minor, this would not create a substantial source of glare that would affect views of the area. This impact would be less than significant; no mitigation is required.

AGRICULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agricultural Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The California Department of Conservation (DOC), Office of Land Conservation, maintains a statewide inventory of farmlands. These lands are mapped by the Division of Land Resource Protection as part of the Farmland Mapping and Monitoring Program (FMMP). The maps are updated every 2 years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance. Farmlands

classified under one of the following five categories, based on their suitability for agriculture, are sometimes collectively referred to as Important Farmland.

- ▶ **Prime Farmland**—land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed.
- ▶ **Farmland of Statewide Importance**—land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production.
- ▶ **Unique Farmland**—land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but that has been used for the production of specific crops with high economic value.
- ▶ **Farmland of Local Importance**—land that either is currently producing crops or has the capability of production, but that does not meet the criteria of the categories above.
- ▶ **Grazing Land**—land on which the vegetation is suited to the grazing of livestock.

Other categories used in the FMMP mapping system, for land not considered Important Farmland, include “urban and built-up lands,” “lands committed to nonagricultural use,” and “other lands” (land that does not meet the criteria of any of the other categories).

The Phase 1 SERP coverage area extends south from Butte County to Sacramento County along the Sacramento River Watershed (Exhibit 1). The alluvial plain associated with the Sacramento River Watershed creates excellent conditions for agricultural land uses. The associated waterways provide a reliable source of water for irrigation. Consequently, land surrounding the Phase 1 SERP coverage area is generally designated as Important Farmland, consisting primarily of Prime Farmland. Agricultural uses include rice crops, other grain crops, vineyards, pasture, field crops, and orchards. The largest agricultural crop in the Phase 1 SERP coverage area, as determined by acreage, is rice, which has historically been the most prominent crop in the Sacramento River Watershed.

DISCUSSION

Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

Less than Significant. Levees and banks, including those within the Phase 1 SERP coverage area, are not considered to be Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Because repairs associated with SERP would be

limited to the levees and banks of waterways in the Phase 1 coverage area, none of the repairs would occur within Important Farmland. In addition, sites repaired under the SERP would not be converted from their existing use to another use. If landside staging and access areas are necessary at individual project sites, the construction contractor (in Phase 1, this would always be the DWR maintenance yards) would use adjacent landside areas, maintenance toe roads, or the crown roads for staging of vehicles, plant materials, and other associated construction equipment. Thus, none of the SERP repairs would convert Important Farmland to a non-agricultural use. There would be no impact.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The Phase 1 SERP coverage area is used for flood risk reduction purposes, and is not zoned for agricultural use or subject to a Williamson Act contract. Thus, none of the SERP repairs would conflict with agricultural or Williamson Act zoning. There would be no impact.

c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

No Impact. Small erosion repairs would provide reduced risk of flooding to areas along the waterways covered by SERP. None of the repairs would occur on agricultural lands, and landside staging and access areas (when necessary for individual project sites) would be in place for no more than 1–2 weeks. For these reasons, implementation of the SERP would not involve changes to the existing environment that could result in conversion of Farmland to non-agricultural uses. Therefore, there would be no impact.

AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact. Implementation of the SERP would result in little to no operational emissions that could degrade air quality. However, during construction of the repair sites, trucks would be required to haul materials to the sites, construction workers would commute to the sites, and construction equipment would be needed to perform the work, which would increase emissions of various criteria air pollutants. Environmental impacts associated with air quality will be discussed in the EIR, and mitigation, if necessary, will be identified for each significant impact. The potential for the SERP to result in increased levels of greenhouse gas emissions will also be evaluated in the cumulative impacts analysis of the EIR.

BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact. Sensitive resources, including special-status species and riparian habitats, may occur along levees and banks within the Phase 1 SERP coverage area and could be affected during construction. Therefore, the SERP could substantially degrade the quality of the environment during construction activities.

The following programmatic permits are being requested as part of SERP:

- ▶ U.S. Army Corps of Engineers – Regional General Permit under Section 404 of the Clean Water Act
- ▶ U.S. Fish and Wildlife Service – Incidental Take Permit under Section 7 of the Endangered Species Act
- ▶ National Marine Fisheries Service – Incidental Take Permit under Section 7 of the Endangered Species Act
- ▶ California Department of Fish and Game – Streambed Alteration Agreement under Section 1602 of the Fish and Game Code and Section 2081 Incidental Take Permit under the California Endangered Species Act
- ▶ Central Valley Regional Water Quality Control Board – Water Quality Certification under Section 401 of the Clean Water Act

Environmental impacts associated with biological resources will be discussed in the EIR, and mitigation, if necessary, will be identified for each significant impact. Information about conditions of approval for the permits listed above will also be provided in the EIR and incorporated into the SERP program description.

CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact. Implementation of the SERP would include construction, excavation, and earthmoving that could disturb known or undiscovered cultural resources. In some cases, the levee itself may be considered a historical resource.

Because the SERP requires federal discretionary permits and approvals (i.e., Section 404 permit from the U.S. Army Corps of Engineers [USACE]), cultural resource impacts will be evaluated under Section 106 of the National Historic Preservation Act. DWR will collaborate with the relevant federal agencies such as USACE to develop an appropriate management strategy for Section 106. USACE may develop a Programmatic Agreement in cooperation with DWR and other relevant federal and state agencies to ensure the appropriate treatment of historic and archaeological resources that may be identified at the repair sites.

Environmental impacts associated with cultural resources will be discussed in the EIR, and mitigation, if necessary, will be identified for each significant impact. The EIR will integrate management of cultural resources required under CEQA with Section 106 policies and the protocols developed under an agreement document so that state and federal management activities are coordinated to the maximum extent feasible.

GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact. Implementation of the SERP would not include any new septic tanks or other methods of waste disposal; however, construction of the repairs could result in erosion or could be located on expansive or unstable soils. Environmental impacts associated with geology and soils will be discussed in the EIR, as well as best management practices typically implemented by DWR maintenance yards to avoid such impacts. Mitigation, if necessary, will be identified for each significant impact.

HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

POTENTIAL SOURCES OF HAZARDOUS MATERIALS

The Hazardous Waste and Substances Sites List, commonly referred to as the Cortese List, provides information related to the location of hazardous materials release sites within the state of California (Government Code Section 65962.5). The Secretary for Environmental Protection compiles the Cortese List from reports prepared by the California Department of Toxic Substances Control (DTSC), California Department of Health Services (DHS), State Water Resources Control Board (SWRCB), and California Integrated Waste Management Board (CIWMB). Cortese-listed sites include hazardous waste facilities subject to corrective actions under Section 25187.5 of the Health and Safety Code, public drinking water wells that contain detectable levels of organic contaminants, leaking underground storage tanks, and sites with known migration of hazardous waste from solid waste facilities. While there are no Cortese-listed sites on the waterside of levees in the Phase 1 SERP coverage area, there are numerous nearby sites where migration of hazardous materials may have caused soil contamination. In some instances, monitoring wells associated with hazardous waste spills are located within the levee prism where construction activities could occur.

AIRPORTS

CEQA Statute Section 21096 requires a lead agency to consider safety hazards for people using an airport or people residing or working in the vicinity of an airport. Airports within 2 miles of the Phase 1 SERP coverage area include:

- ▶ Colusa County Airport, Colusa (public airport);
- ▶ Davis Airport, Colusa (private airport);
- ▶ Vanderford Ranch Airport, Yuba City (private airport); and
- ▶ Borges-Clarksburg Airport, Clarksburg (private airport).

SCHOOLS WITHIN ONE-QUARTER MILE OF THE COVERAGE AREA

CEQA requires special consideration for schools located within 0.25 mile of a repair site. Schools located within 0.25 mile of the Phase 1 SERP coverage area include:

- ▶ Delta Elementary Charter School, 346 W Grant Line Road, Clarksburg;
- ▶ Clarksburg Middle School, 52870 Netherlands Road, Clarksburg;
- ▶ Delta High School, 52810 Netherlands Road, Clarksburg;
- ▶ William Elementary School, 222 11th Street, Colusa;
- ▶ Gridley State Preschool, 11567 Booth Drive, Gridley;
- ▶ Grafton Elementary School, 9544 Mill Street, Knights Landing;
- ▶ Princeton High School, 473 State Street, Princeton;
- ▶ Princeton Elementary School, 428 Norman Road, Princeton;
- ▶ Bergamo Preparatory School, 8200 Pocket Road, Sacramento;
- ▶ Genevieve Didion School, 6940 Harmon Drive, Sacramento;
- ▶ Land Park Academy, Riverside Campus, 6011 Riverside Boulevard, Sacramento;
- ▶ Brookfield School, 3600 Riverside Boulevard, Sacramento;
- ▶ Arthur A. Benjamin Health Professions High School, 451 McClatchy Drive, Sacramento;
- ▶ Jedediah Smith Elementary School, 401 McClatchy Way, Sacramento;
- ▶ Lincoln Plaza Montessori, 400 P Street, Sacramento;
- ▶ Discovery Preschool, 205 Stone Boulevard, West Sacramento;
- ▶ Golden State Middle School, 1100 Carrie Street, West Sacramento; and
- ▶ Cache Creek (Continuation) High School, 145 Second Street, Yolo.

FIRE HAZARDS

Public Resources Code 4201–4204 and Government Code 51175–51189 require identification of fire hazard severity zones within the State of California. Fire hazard severity zones are measured qualitatively as moderate, high, or very high, based on vegetation, topography, weather, crown fire potential (based on a fire’s tendency to burn upwards into trees and tall brush), and potential ember production and movement within the area. Fire prevention areas considered to be under state jurisdiction are referred to as “state responsibility areas.” “Local responsibility areas” are under the jurisdiction of local entities such as cities and counties. The Phase 1 SERP coverage area is in a local responsibility area that is generally unzoned for fire hazard severity. The small areas that are zoned are considered to have only a moderate fire hazard severity risk, which is the lowest rating available.

DISCUSSION

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Less than Significant. Repairs of erosion sites under Phase 1 of the SERP would involve the routine transport and handling of hazardous substances such as diesel fuels, lubricants, and solvents. Handling and transport of these materials could result in the exposure of workers to hazardous materials. However, the SERP would be in compliance with applicable federal, state, and local laws pertaining to the handling and transport of hazardous materials, including the California Occupational Health and Safety Administration requirements. Because the repairs would comply with applicable laws, this impact would be less than significant; no mitigation is required.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

Less than Significant. As discussed above, small erosion repairs would involve the use of heavy construction equipment, which uses small amounts of hazardous materials such as oils and fuels. However, DWR would work with the contractor (during Phase 1, DWR maintenance yards) to establish construction staging areas where hazardous materials would be stored during construction, and would require that any spills be cleaned up and reported to the appropriate agencies within 24 hours. If a spill were to occur, it would be minor (involving very small amounts of construction equipment-related materials) and therefore would have a less-than-significant impact; no mitigation is required.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Less than Significant. Approximately 18 schools are located within 0.25 mile of levees where construction might occur. The handling and transportation of hazardous materials used during construction would be regulated under applicable federal, state, and local laws. Because the hazardous materials used during construction, such as equipment lubricants and diesel fuels, would be present for a short period (no more than 1–2 weeks) and would occur in small amounts, and because transport of these materials is regulated by local, state, and federal law, the potential for a large enough spill to adversely affect nearby schools is considered extremely low. Therefore, this impact would be less than significant; no mitigation is required.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Less than Significant with Mitigation. There are no Cortese-listed sites within the Phase 1 SERP coverage area; however, in some instances, monitoring wells associated with hazardous materials sites could be located near repair sites associated with the SERP. In such circumstances, construction activities in hazardous materials sites or damage to monitoring wells could physically harm construction workers or release hazardous substances into the air and waterways, potentially exposing construction workers, the general public, and the environment to a substantial hazard. Some of the Cortese-listed sites have an associated land use restriction such as a deed notice or deed restriction that could affect implementation of a small erosion repair. Therefore, this impact would be potentially significant. Implementation of Mitigation Measure HAZ-1, described below, would reduce this impact to a less-than-significant level.

Mitigation Measure HAZ-1: Coordinate with Regulatory Agencies to Preserve, Modify, Close, or Avoid Existing Groundwater Monitoring Wells during SERP Repairs.

For individual repair sites located near or adjacent to Cortese-listed sites, DWR will submit engineering plans and specifications to applicable regulatory agencies to determine whether groundwater monitoring wells are located on or near the repair site. If monitoring wells are identified, DWR and the applicable agencies will establish appropriate methods for preservation, modification, closure, or avoidance of the wells during repair of the repair site. Repair plans and specifications will be modified where necessary to accommodate land use restrictions to the satisfaction of DWR and the appropriate regulatory agency.

Implementation of Mitigation Measure HAZ-1 will reduce the potentially significant impact of land use constraints associated with Cortese-listed sites to a less-than-significant level because relevant land use restrictions will be followed in accordance with the appropriate regulatory agency.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Less than Significant with Mitigation. There are four airports within 2 miles of the Phase 1 SERP coverage area. Safety hazards associated with airports are generally related to construction of tall structures and the creation of wildlife attractants (e.g., wetlands, golf courses, and waste disposal operations) that could interfere with airplane flight paths. While repairs associated with SERP would not result in the construction of tall buildings or the creation of hazardous wildlife attractants, cranes used in unloading from barges could. However, FAR Part 77 of the Code of Federal Regulations provides guidance for determining obstructions to air navigation and establishes the slope and

dimensions of the horizontal surface, conical surface, primary surface, approach surface, and transitional, as follows:

- (a) *Horizontal surface.* A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:
 - (1) 5,000 feet for all runways designated as utility or visual;
 - (2) 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.
- (b) *Conical surface.* A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- (c) *Primary surface.* A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of a primary surface is:
 - (1) 250 feet for utility runways having only visual approaches.
 - (2) 500 feet for utility runways having nonprecision instrument approaches.
 - (3) For other than utility runways the width is:
 - (i) 500 feet for visual runways having only visual approaches.
 - (ii) 500 feet for nonprecision instrument runways having visibility minimums greater than three-fourths statute mile.
 - (iii) 1,000 feet for a nonprecision instrument runway having a nonprecision instrument approach with visibility minimums as

low as three-fourths of a statute mile, and for precision instrument runways.

The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.

(d) *Approach surface.* A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

(1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

- (i) 1,250 feet for that end of a utility runway with only visual approaches;
- (ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;
- (iii) 2,000 feet for that end of a utility runway with a nonprecision instrument approach;
- (iv) 3,500 feet for that end of a nonprecision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile;
- (v) 4,000 feet for that end of a nonprecision instrument runway, other than utility, having a nonprecision instrument approach with visibility minimums as low as three-fourths statute mile; and
- (vi) 16,000 feet for precision instrument runways.

(2) The approach surface extends for a horizontal distance of:

- (i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;
- (ii) 10,000 feet at a slope of 34 to 1 for all nonprecision instrument runways other than utility; and,
- (iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.

(3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

(e) *Transitional surface.* These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

Because there are several airports within 5,000 feet of the Phase 1 SERP coverage area, there is a possibility that a crane greater than 150 feet in height could violate these requirements. This impact would be potentially significant.

Mitigation Measure HAZ-2: Coordinate with Airports to Avoid Potential Hazards Associated with Height Requirements in Navigable Airspace.

For individual repair sites located near or adjacent to airports, DWR shall submit engineering plans and specifications, including a list of all construction equipment height to applicable airport management. Repair plans, specifications, and/or construction equipment will be modified where necessary to accommodate land use restrictions to the satisfaction of DWR and the appropriate regulatory agency.

Implementation of Mitigation Measure HAZ-2 will reduce the potentially significant impact of land use constraints associated with airport height requirements in navigable airspace to a less-than-significant level because relevant land use restrictions will be followed in accordance with FAR part 77.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Less than Significant with Mitigation. As discussed in item e), although several private airports are located within the vicinity of the Phase 1 SERP coverage area, construction activities associated with small erosion repairs could result in airport safety hazards. Therefore, this impact would be potentially significant.

Mitigation Measure: Implement Mitigation Measure HAZ-2: Coordinate with Airports to Avoid Potential Hazards Associated with Height Requirements in Navigable Airspace.

Implementation of Mitigation Measure HAZ-2 will reduce the potentially significant impact of land use constraints associated with airport height requirements in navigable airspace to a less-than-significant level because relevant land use restrictions will be followed in accordance with FAR part 77.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. The Phase 1 SERP coverage area is located within existing levees and waterways. These areas are maintained by DWR as part of the state's flood risk reduction infrastructure and are not directly affected by or involved with emergency response plans or emergency evacuation plans. While staging areas may not be located on flood risk reduction structures, sites for staging areas would be selected to ensure that they do not interfere with emergency response evacuation routes. The individual erosion repair activities would take no more than 1–2 weeks; many repairs would be managed from barges on the waterside, and for those managed from the landside, equipment would be staged off of access roads. The potential for these small-scale, short-term, temporary activities to conflict with an adopted emergency response plan or emergency evacuation plan is minimal. Thus, the impact would be less than significant; no mitigation is required.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less than Significant. The Phase 1 SERP coverage area is located in local responsibility areas that are either unzoned or present only a moderate fire hazard severity risk. Though sparks from construction equipment could ignite a fire, the risk is considered to be very low with the use of properly maintained and operated equipment. Small erosion repairs would be located within existing levees and waterways, which are not considered wildlands or urbanized areas. Thus, this impact would be less than significant; no mitigation is required.

HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact. Implementation of the SERP would not deplete groundwater resources or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. However, the repairs would require work within the floodplain and possibly waterbodies, could have an effect (although likely beneficial) on flood hazards, and could result in water quality impacts during construction. No housing would be constructed or affected by the SERP, so the repairs would have no impact on housing within a 100-year flood hazard area. Environmental impacts associated with hydrology and water quality will be discussed in the EIR, and mitigation, if necessary, will be identified for each significant impact.

LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Land Use and Planning.				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The Phase 1 SERP coverage area is located within Butte, Colusa, Glenn, Sacramento, Solano, Sutter, and Yolo Counties. The primary land uses adjacent to the Phase 1 SERP coverage area include agricultural, urban, silvicultural, and open space. Land use within the Phase 1 SERP coverage area is limited to flood control structures, consisting of banks and levees adjacent to waterways. These banks and levees generally protect agricultural land; however, some urban areas are located nearby, including Sacramento, Yuba City, Woodland, and Davis.

Numerous public lands are located adjacent to the Sacramento River and its tributaries within the coverage area. These include several wildlife refuges managed by the U.S. Fish and Wildlife Service (USFWS) such as the Sacramento River Wildlife Refuge, North Central Valley Wildlife Management Area, Sutter National Wildlife Refuge, Stone Lakes National Wildlife Refuge, and Vic Fazio Yolo Wildlife Area. The Sacramento metropolitan area contains more than a dozen parks adjacent to the Sacramento River and American River. Some of the larger parks include the American River Parkway and Discovery Park.

The coverage area is subject to numerous conservation plans, including:

- ▶ Comprehensive Conservation Plan for the Sacramento, Delevan, Colusa, and Sutter National Wildlife Refuges
- ▶ Comprehensive Conservation Plan for the Sacramento River National Wildlife Refuge
- ▶ Natomas Basin Habitat Conservation Plan
- ▶ Solano County Habitat Conservation Plan
- ▶ Yolo Natural Heritage Program

In addition, several conservation plans are currently in preparation. Future SERP repairs may be subject to the three plans listed below:

- ▶ South Sacramento Habitat Conservation Plan
- ▶ Yuba-Sutter Habitat Conservation Plan
- ▶ Butte Regional Habitat Conservation Plan/Natural Community Conservation Plan

DISCUSSION

Would the project:

a) Physically divide an established community?

No Impact. The Phase 1 SERP coverage area is located along banks and levees of waterways and would not create additional divisions within existing communities. Therefore, implementation of repairs would not physically divide an established community and there would be no impact.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. Small erosion repairs would be limited to areas used for flood control. Implementation of repairs would not adversely affect current land uses, and would not cause changes at the repair sites that would conflict with any applicable land use plan, policy, or regulation. There would be no impact.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Potentially Significant Impact. Impacts related to applicable habitat conservation plans or natural community conservation plans will be discussed in the biological resources section of the EIR, as discussed in item IV(f). See the discussion there for more information.

MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The primary mineral resources found along waterways in California are sand and gravel. In California, sand and gravel have an economic value many times larger than that of all other minerals mined statewide, including gold (Butte County 2007:11-3). Sand and gravel deposits within the Phase 1 SERP coverage area are found primarily along the larger waterways, including the Sacramento, Yuba, American, Feather, and Bear Rivers. However, gravel along many of the rivers is not extensively mined, because of environmental constraints, high water tables, and the ease of using other supplies. Other areas of mineral deposits in the coverage area include Stony Creek in Glenn County, Cache Creek in Yolo County, and the Cosumnes River in Sacramento County (Sacramento County 1993:33; Glenn County 1993:22).

DISCUSSION

Would the project:

- a), b) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or is a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

No Impact. There are known mineral resources located along many of the waterways within the Phase 1 SERP coverage area. However, the SERP repairs would be small (i.e., no more than 0.5 acre or 1,000 feet in length) and would not occur in areas being actively mined. In addition, the proposed repairs would be limited to levees and banks,

which would not be mined for mineral resources because of regulatory restrictions protecting their role in flood management. Because of the small size and limited location of the SERP repairs, it is unlikely that implementation would result in the loss of any known mineral resources. No impact would occur.

NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact. The SERP would include repair of small erosion sites within the program coverage area. Implementation of the SERP would involve construction activities, including use of heavy equipment and multiple trips by haul trucks, that could result in temporary increases in ambient noise levels and possibly exceedances of noise standards at some locations. Environmental impacts associated with noise will be discussed in the EIR, and mitigation, if necessary, will be identified for each significant impact.

POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Population and Housing.				
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The Phase 1 SERP coverage area extends through seven counties that cover most of the northern portion of the Central Valley of California: Butte, Colusa, Glenn, Sacramento, Solano, Sutter, and Yolo Counties. In 2009, approximately 2.5 million people lived in this seven-county coverage area, giving it approximately 6% of the total population of the state of California (38 million). Of the seven counties, Colusa County is the smallest, with approximately 22,000 residents, and Sacramento County is the largest, with over 1.4 million residents (U.S. Department of Finance [DOF] 2009).

Housing characteristics in the seven-county coverage area are generally similar to those at the state level. In 2009, the seven-county coverage area had approximately 950,000 housing units, which is approximately 7% of the total housing stock for the state (approximately 14 million houses) (DOF 2009).

DISCUSSION

Would the project:

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

No Impact. The SERP would not involve residential, commercial, or industrial development that could induce population growth. The SERP would repair erosion damage to existing levee facilities and would not extend roads or construct other new infrastructure that could indirectly induce population growth. The SERP would include only minor (up to 0.5 acre or 1,000 linear feet) erosion repairs to existing levees and banks, and would not include major levee repairs or upgrades that could allow additional development in the areas protected by those levees. Any larger levee repairs would undergo separate environmental review. Construction of each repair would require 3–10 construction workers who would work at each site for approximately 1–2 weeks. During Phase 1, all work would be conducted by the DWR maintenance yards; no new employees would be hired and no outside contractors would be used. No more than 15 small erosion repairs would be completed per year. Because the repairs would produce construction work for existing DWR employees, implementation would not induce substantial population growth. No impact would occur.

- b) **Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?**

No Impact. The SERP would repair small erosion sites within the Phase 1 SERP coverage area and would not displace any existing homes. Therefore, the SERP would have no impact on existing houses.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

No Impact. As discussed in item b), the SERP would involve repairs to small erosion sites within the Phase 1 SERP coverage area and would not displace any homes or people. No replacement housing would be required; thus, there would be no impact.

PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The repair sites selected within the Phase 1 SERP coverage area would be located on the waterside of the levees of the Sacramento River and its tributary streams and channels. Public services are provided to adjacent land uses on the landside of the levees by the counties, cities, school districts, and other special districts in which the repair sites would be located.

DISCUSSION

Would the project:

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

Fire and Police Protection?

No Impact. The SERP would not result in new development or any population increase that would create the need for additional fire or police protection services (see discussion in Section XII, "Population and Housing," item [a]). Construction of the individual repairs would not interfere with any emergency response plans (see discussion in Section VII, "Hazards and Hazardous Materials," item [g]). Because the SERP would not increase the demand for fire or police services, there would be no impact.

Schools?

No Impact. There are approximately 18 schools within 0.25 mile of the coverage area (see discussion in Section VII, "Hazards and Hazardous Materials," item [c]). However, the individual repairs would not have a direct impact on schools and would not include new development or population increases that would increase the demand for schools.

Parks or Other Public Facilities?

No Impact. As described in item a) above, the SERP would not result in new development or population increases that would increase the demand for parks or other public facilities.

RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

A number of state and local parks are located adjacent to the rivers throughout the Phase 1 SERP coverage area (e.g., Colusa-Sacramento River State Recreation Area in Colusa County and Discovery Park in the City of Sacramento). Numerous public boat launch facilities, private marinas, RV parks, and resorts are located within the Phase 1 SERP coverage area along the Sacramento River.

DISCUSSION

Would the project:

- a) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Less than Significant. Implementation of SERP would not result in new development or population increases, and thus would not result in increased use of existing parks or other recreational facilities. However, erosion repair work could potentially cause disruption to recreational uses of nearby facilities and of the river, depending on the location of the repair site. Therefore, during construction of any erosion repairs near recreational facilities, construction signage would be posted, and closures or detours would be posted. Construction is expected to last approximately 1–2 weeks at any one site, and therefore any disruptions to recreation would be minor and temporary. This impact would be less than significant; and therefore, no mitigation is required.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

No Impact. Implementation of SERP would not include any recreational facilities, nor would they require expansion of recreational facilities. Therefore, SERP would have no impact on recreational facilities.

TRANSPORTATION/TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Transportation/Traffic.				
Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The Phase 1 SERP coverage area is located on the waterside of the levees of the Sacramento River, Feather River, American River, and of tributary streams and channels. Regional access to the coverage area would be provided via Interstate 5, State Route (SR) 99, and SR 160, which run in a north-south direction, and Interstate 80, which runs in an east-west direction. Local access to the specific repair sites would be provided via existing roadways and operations and maintenance routes. Adjacent landside areas, maintenance toe roads, and levee crown roads would be used for staging of vehicles, plant materials, and other associated construction equipment.

DISCUSSION

Would the project:

- a) **Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

Less than Significant with Mitigation. Construction activities would cause a temporary traffic increase on haul routes used to access individual repair sites (i.e., haul routes). Construction equipment (e.g., crane, dozer, back hoe) would be transported either by barges along waterways or on trucks along Interstate 5, Interstate 80, SR 99, or SR 160, and urban or rural roadways near each repair site. The repairs would require the use of rocks, vegetation, and soil, which would be transported to repair sites on trucks or barges. Barges would be used to the extent possible to minimize traffic; however, some repair sites may not be accessible by barge and all materials would then need to be trucked to the site. It is anticipated that Tier 1 repairs would require approximately 300–600 tons of material, and Tier 2 repairs would require approximately 1,600–2,600 tons of material. Assuming that each truckload could transfer either 12 or 25 cubic yards of material, up to 75 truck trips for a Tier 1 repair, and 325 truck trips for a Tier 2 repair could be required for repair sites that are not accessible by barge. These truck trips would occur on rural roadways, where this could constitute a substantial increase in vehicle trips and potentially cause congestion at intersections. In addition, it is anticipated that each small erosion repair would require between 3 and 10 construction workers each day. It is not expected that individual repairs would take more than two weeks to complete. However, this impact would be potentially significant because truck trips associated with repairs could substantially increase traffic in relation to the existing loads.

Mitigation Measure T-1: Prepare and Implement a Traffic Management Plan for Construction-Related Truck Trips.

Before the start of construction at any repair site, DWR shall develop a coordinated construction traffic safety and control plan to minimize the simultaneous use of haul

routes for material hauling and equipment delivery during construction. The traffic management plan will include, as appropriate:

- ▶ advance warning signs to be installed on affected haul routes advising motorists of the construction zone ahead to minimize hazards associated with potential conflict with construction vehicles and to notify motorists of any closure;
- ▶ either flaggers, illuminated signs, a temporary stoplight, a flashing yellow light, or a combination of these methods to slow approaching traffic at the repair sites when truck traffic may impede traffic flow; and
- ▶ placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in The California Department of Transportation's *Manual of Traffic Controls for Construction and Maintenance Works Zone* (California Department of Transportation 2006) and in accordance with city/county requirements.

Implementation of Mitigation Measure T-1 would reduce impacts related to increased traffic load to a less-than-significant level because a traffic management plan would control traffic flow.

b) Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less than Significant with Mitigation. Because the specific small erosion repair locations are not known at this time, it is not possible to determine if a level of service standard would be exceeded. However, as discussed above, a maximum of 325 truck trips could occur over a 5-day period. Thus, this impact is considered potentially significant.

Mitigation Measure T-1: Prepare and Implement a Traffic Management Plan for Construction-Related Truck Trips.

Implementation of Mitigation Measure T-1 would reduce impacts related to potentially exceeding LOS standards to a less-than-significant level because a traffic management plan would control traffic flow.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Repair of erosion sites along levees and banks would not include any changes that could have any effect on air traffic patterns. Therefore, there would be no impact.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant with Mitigation. Implementation of repairs would not include design features such as sharp curves or dangerous intersections that would increase hazards, nor would it result in incompatible land uses. However, the use of 30 to 130 large trucks per individual repair to transport equipment and materials to the work area could affect road conditions on haul routes in the vicinity of the repair site by increasing the rate of road wear and could damage the haul route. Damage to the haul routes would require motorists to reduce speeds or potentially use alternate routes, which could increase vehicle trips and cause congestion in affected areas. This impact would be significant. Implementing Mitigation Measure T-2 would reduce this impact to a less-than-significant level.

Mitigation Measure T-2: Restore Damaged Haul Routes to Their Preconstruction Conditions.

DWR shall require that, as part of the individual repair, all haul routes used to access individual repair sites be restored to their preconstruction conditions upon completion of construction. DWR's primary contractor (for Phase 1, the DWR maintenance yards) will inspect and document the condition of haul routes prior to and after completion of each repair. Also before construction begins, DWR will coordinate with the applicable county regarding a post-construction haul route repair/rehabilitation program. If damage to haul routes is detected, repairs will be completed immediately; at a minimum, routes damaged as a result of construction will be repaired to a structural condition equal to that which existed prior to the start of construction activities.

Implementation of Mitigation Measure T-1 would reduce this impact to a less-than-significant level because it would require repair of any haul route segment(s) damaged by construction activities to a structural condition equal to that which existed prior to the start of construction activities.

e) Result in inadequate emergency access?

No Impact. The repair sites would be located on the waterside of the levees of the Sacramento River, Feather River, American River, and of tributary streams and channels. Construction staging areas would be located within adjacent landside areas, maintenance toe roads, and the levee crown roads, and would not be located within emergency access routes.

f) Result in inadequate parking capacity?

No Impact. Construction staging areas would be located on adjacent landside areas, maintenance toe roads, and levee crown roads and would include areas for construction-related parking; existing parking areas would not be affected.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. Implementation of SERP would affect the waterside of levees and would therefore not conflict with policies or programs supporting alternative transportation. While construction-related traffic would use Interstate 5, Interstate 80, SR 99, and SR 160, the increase would not be sufficient to disrupt or conflict with programs supporting alternative transportation.

UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Utilities and Service Systems.				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Utilities and public services are provided to adjacent land uses on the landside of the levees by the counties or cities, community service districts, or utility districts in which the repair sites would be located. The seven-county Phase 1 SERP coverage area is under the jurisdiction of the Central Valley Regional Water Quality Control Board (CVRWQCB). In addition, all seven counties within the coverage area are serviced by Pacific Gas & Electric (PG&E).

DISCUSSION

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. Implementation of SERP would not involve new residential, commercial, or industrial development that would generate additional wastewater, so wastewater treatment requirements would not be exceeded. Erosion repairs would be designed to prevent further erosion, which would reduce the amount of sediment entering the affected waterway and thus improve the localized water quality. A programmatic Section 401 water quality certification is being requested for the SERP, with conditions to be identified by the CVRWQCB. Therefore, there would be no impact on wastewater treatment requirements.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Implementation of SERP would not involve new residential, commercial, or industrial development that would result in additional demand for wastewater treatment facilities or the expansion of existing facilities. The purpose of the SERP is to repair, maintain, and restore levees to their pre-erosion condition.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Implementation of SERP would not involve new residential, commercial, or industrial development that would result in additional need for storm water drainage facilities or the expansion of existing facilities. All of the erosion repairs would be designed to allow proper drainage.

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

Less than Significant. The SERP would not involve new residential, commercial, or industrial development that would result in additional demand for water supplies. Some of the erosion repairs would include plantings as part of the design. However, plantings would be designed to survive without supplemental watering because plantings would be installed along the waterline of the repair site or planting would be delayed until the most appropriate season to avoid the need for watering. Therefore, this impact would be less than significant and therefore, no mitigation is required.

- e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?**

No Impact. See item b) above.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Less than Significant. The SERP would not likely result in generation of solid waste that would require disposal at a landfill. In addition, any excess materials generated from the repairs (e.g., soil, rock, plant) would be incorporated into the site if possible. The potential exists for small amounts of construction waste or on-site materials to be transported to a nearby landfill. Therefore, this impact would be less than significant.

- g) Comply with federal, state, and local statutes and regulations related to solid waste?**

Less than Significant. As discussed in f) above, the SERP would not likely generate solid waste. Any excess materials generated from the repairs (e.g., soil, rock, plant) would be incorporated into the site and all excess materials would be handled in compliance with federal, state, and local statutes and regulations related to solid waste. Therefore, this impact would be less than significant.

MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authority: Public Resources Code Sections 21083 and 21087.

Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151; Sundstrom v. County of Mendocino, 202 Cal.App.3d 296 (1988); Leonoff v. Monterey Board of Supervisors, 222 Cal.App.3d 1337 (1990).

DISCUSSION

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

Potentially Significant Impact. Sensitive resources, including special-status species and riparian habitats, occur along levees and river banks within the coverage area and could be affected during project construction. Therefore, the SERP could substantially degrade the quality of the environment. Impacts on biological resources will be fully addressed in the EIR.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Potentially Significant Impact. While the erosion repair work would be limited to the waterside of the levees and river banks within the coverage area and each erosion repair site would be small (i.e., 0.5 acre or less), construction of numerous erosion repairs within the Phase 1 SERP coverage area (up to 15 per year over a 5-year period) could contribute incrementally to regional impacts relating to air quality, biological resources, hydrology and water quality, geology and soils, or cultural resources. Direct, indirect, and cumulative impacts related to these issue areas are currently unknown and will be fully analyzed in the EIR. For this reason, the proposed repairs would have potentially significant cumulatively considerable impacts on air quality (including greenhouse gas emissions), biological resources, noise, hydrology and water quality, geology and soils, and cultural resources.

- c) **Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

Potentially Significant Impact. The SERP could result in impacts related to air quality, biological resources, noise, hydrology and water quality, geology and soils, and cultural resources, which could cause substantial adverse effects on human beings. Impacts on these issue areas will be fully addressed in the EIR.

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Appendix A

Draft Small Erosion Repair Program Design Templates

The following descriptions and exhibits are draft versions of the proposed design templates for each of the seven basic levee repair scenarios anticipated to be needed. (Design Templates 6 and 7 are still in development and will be provided in the draft EIR.)

DESIGN TEMPLATE 1: BANK FILL ROCK SLOPE WITH LIVE POLE PLANTING

This design entails installing revetment along the levee slope from the levee's toe to the upper extent of the erosion or 1–2 feet above the summer/fall average water level (whichever is higher up the slope) (Exhibit A-1). The revetment size is determined by engineering judgment based on peak flow velocities, bank slope, and other factors. The revetment would be placed at a constant slope dependent on the existing upstream and downstream slope angles. The rocks can be placed on top of existing groundcover vegetation if the vegetation does not interfere with rock placement. Larger vegetation, such as shrubs and stumps, should be removed to provide contact between the placed rock and soil slope. Stable, healthy trees should remain and rock hand-placed around them (consistent with USACE's Interim Vegetation Inspection Criteria for Standard Levees [October 2007]). In addition, downed trees that act as instream woody debris may remain in place if deemed not detrimental to the repair. The uppermost bank (Zone 1) would be planted with vegetation that provides resistance to erosion, such as native grasses. Above the summer/fall average water level (Zone 2), the revetment will be blended with soil at a 70:30 mix to provide a growth medium for vegetation. Below the summer/fall average water level, only rock revetment would be used. Vegetation plugs or live pole cuttings would be installed within the rock revetment above the summer/fall average water level and buried at least 2/3 of their length to penetrate the capillary fringe (moist soil above the water table) of the bank or levee.

After project construction, vegetation coverage is expected to expand, as growth of new plantings and regeneration of disturbed plants continues. Plants and pole cuttings would be established along the summer/fall average water level with the long-term goal of providing riparian and shaded riverine aquatic (SRA) cover habitat as defined by NMFS. The upper bank areas (Zones 1 and 2) would be seeded and covered with mulch to control erosion during the first rain events following planting.

DESIGN TEMPLATE 2: WILLOW WATTLE WITH ROCK TOE

This design would be useful for sites where erosion has occurred above the summer/fall average water level from an extremely high water event or runoff on the slope (Exhibit A-2). The benefit of this repair compared to Design Template 1 is that revetment may be unnecessary because the upper slope would only occasionally be exposed to erosive forces. This design is identical to Design Template 1 from the toe to the summer/fall average water level. Above that level, the bank would be graded to the desired slope angle with soil. To help stabilize the soil and provide for additional vegetative growth, 12-inch-diameter bundles of live cuttings (willow wattles) would be placed into excavated trenches parallel to the flow. The willow wattles would be placed in rows spaced 3–5 feet apart, providing a terrace effect above the water level. The willow wattles would be secured to the slope using live pole cuttings. The area above

the summer/fall average water level (Zones 1 and 2) would be seeded with native grasses and mulched for erosion control. Live willow wattle and pole plantings would require water, so the live pole cuttings should be at least 2/3 buried to penetrate the capillary fringe (moist soil above the water table) of the bank or levee.

DESIGN TEMPLATE 3: BRUSH LAYERING

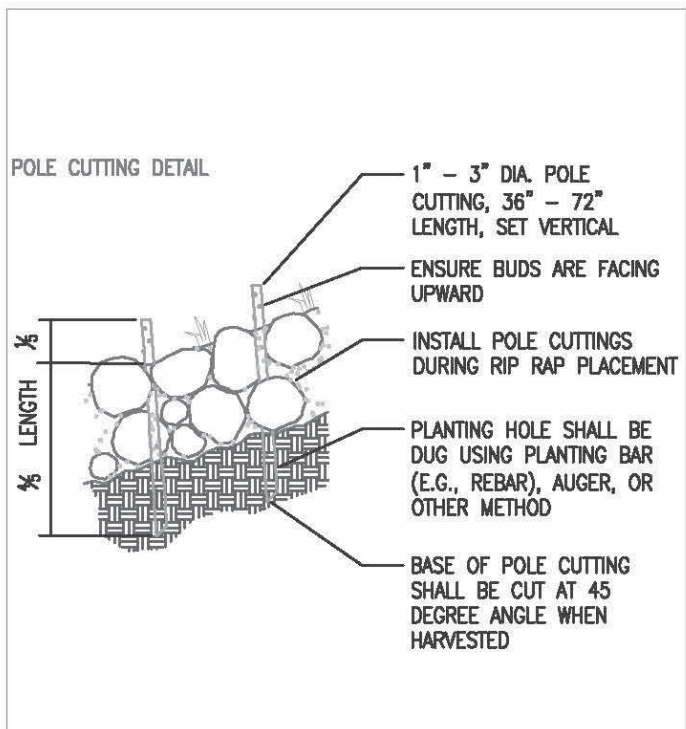
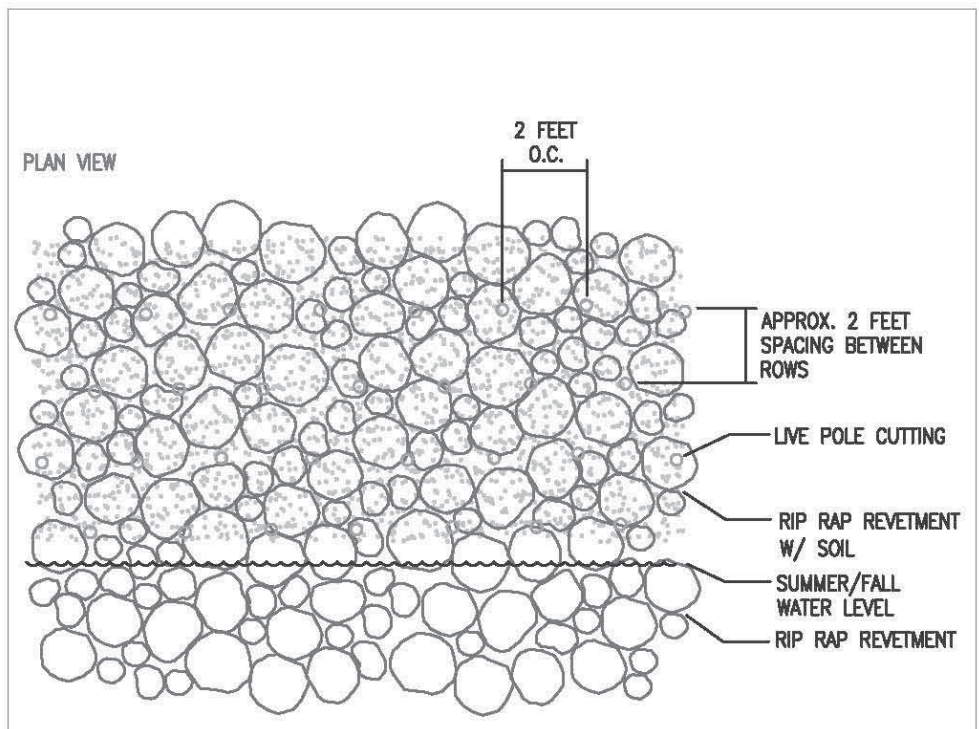
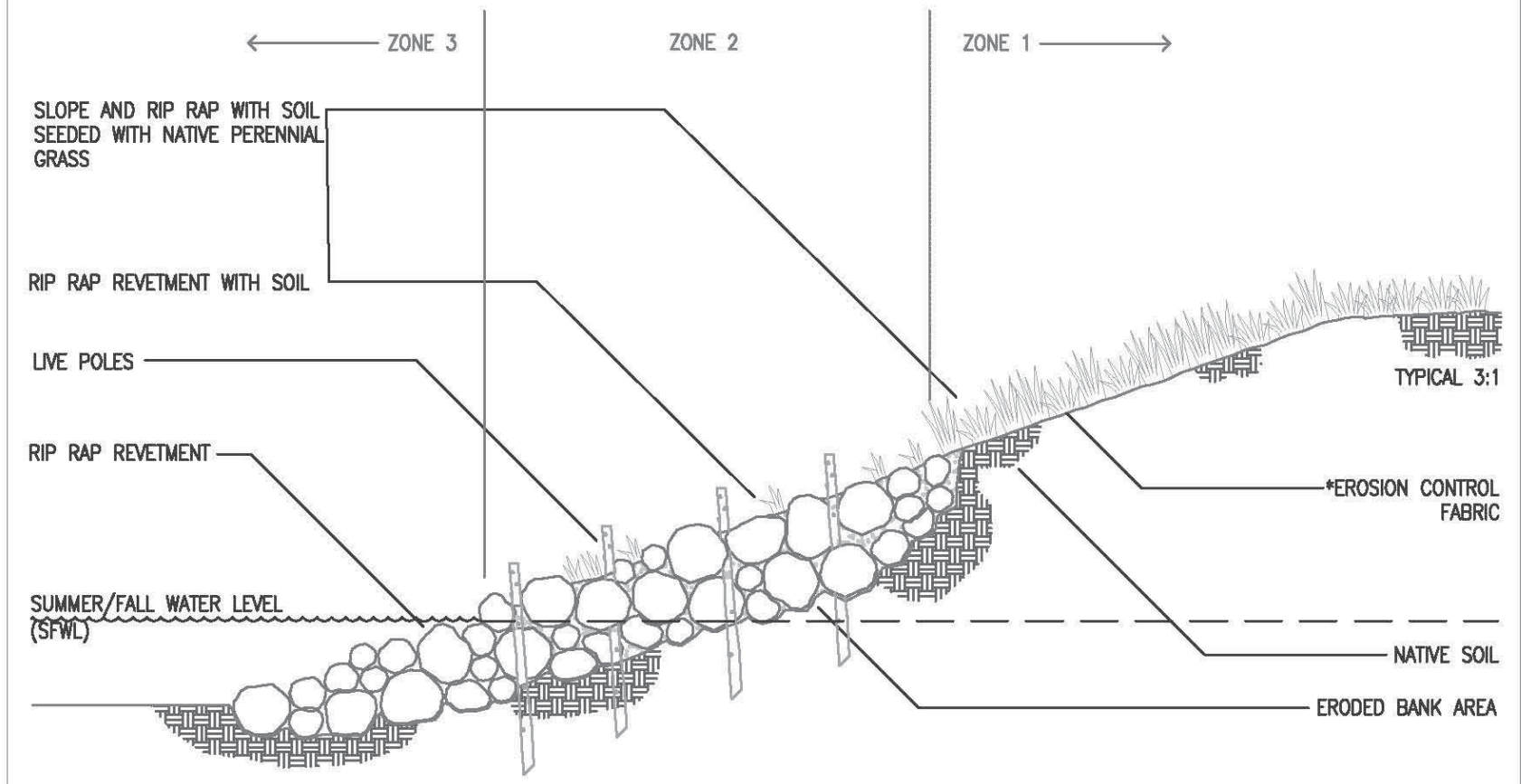
Design Template 3 would involve layering live woody cuttings with lifts of compacted soil to reestablish a stable, vegetated slope (Exhibit A-3). This design is limited to sites where the difference in elevation from the summer/fall average water level to the design high water elevation is less than 4 feet. This repair is for small, isolated scallops or slumps that should be filled before further damage occurs. The live woody cuttings protect slopes from erosion caused by runoff or waves on the levee slope. The live branches are 0.5–3 inches in diameter and of a length that the cut end of the branch touches the undisturbed slope and protrudes about 1 foot from the face of the final slope.

DESIGN TEMPLATE 4: ROCK TOE WITH LIVE POLE PLANTING

This design is similar to Design Template 1 with the following differences: (1) pole cuttings would be placed both in the riprap just above the summer/fall average water level and in the native soil just above the riprap and (2) soil would not be mixed in with the riprap (Exhibit A-4). This design is useful for repairing slopes that experience frequent erosion at the toe of the bank. This design is best suited to river systems with consistent flows and low velocities.

DESIGN TEMPLATE 5: SOIL AND ROCK FILL AT THE BASE OF A FALLEN TREE

This design would be used to repair small voids created by a local scour or downed tree. The eroded bank would be filled with rock riprap and planted with live pole cuttings (Exhibit A-5). Soil above the summer/fall average water level would be mixed with the rock riprap. In some cases, such as outside bends, the fallen tree can be used as revetment to deflect flows. This design would not be used in areas with high water flows where water could erode the soil behind the tree's root fan.



BANK FILL ROCK SLOPE WITH LIVE POLE PLANTING

Description and Application:
Bank fill rock slope with live pole planting is suitable for situations where significant bank erosion has occurred. Rock rip rap and a mix of soil and rock rip rap is placed in the eroded area and live pole cuttings are installed in the rip rap. This technique creates a stable, vegetated bank toe and protected middle and upper bank, and is suitable for banks on inner and outer bends.
Maximum Slope: 1:1
Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).
Channel Location: Inner and outer bends.

Limitations:
Live pole plantings may not be suitable for setback levees and bypass levees that are dry most of the year.

Construction Notes:
Rock rip rap material shall be placed from the toe of the slope to a point at minimum 1'-2' above the SFWL. Rock rip rap and soil mixture (70/30) shall be installed above the SFWL to facilitate vegetated growth. To optimize growth, live woody cuttings should be harvested and installed during the dormant season (i.e., winter). Option: install sonotubes/steel pipes for follow-up winter planting. If live woody cuttings are harvested and installed during the growing season, the receiving site must have consistent water levels sufficient to maintain soil moisture that reaches the cuttings. Live woody cuttings shall be submerged in water for 1-7 days (24 hours min.) prior to installation. Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:
Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.
Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.
Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:
Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:
The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

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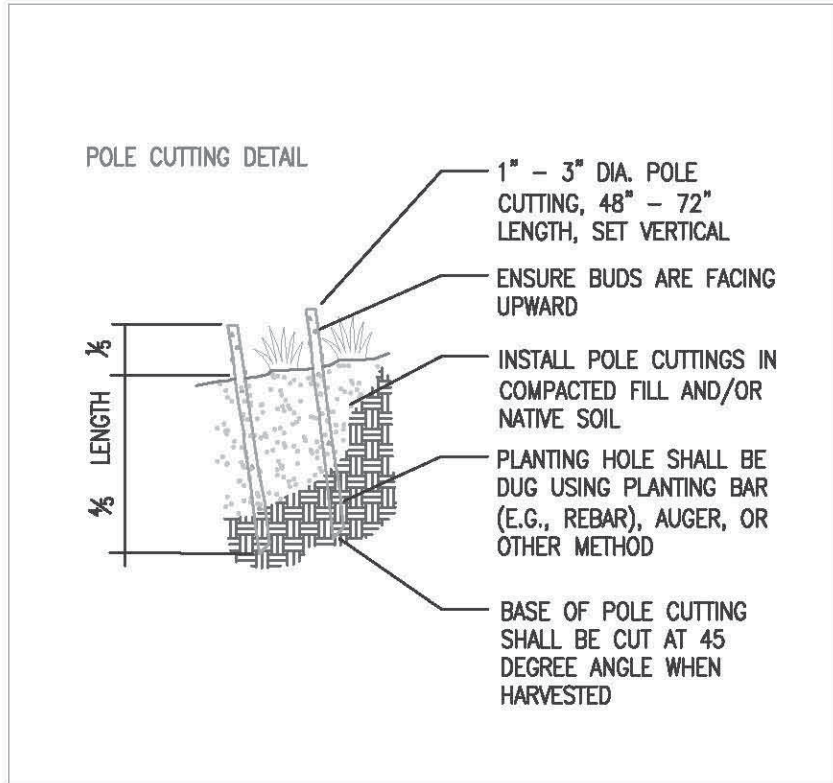
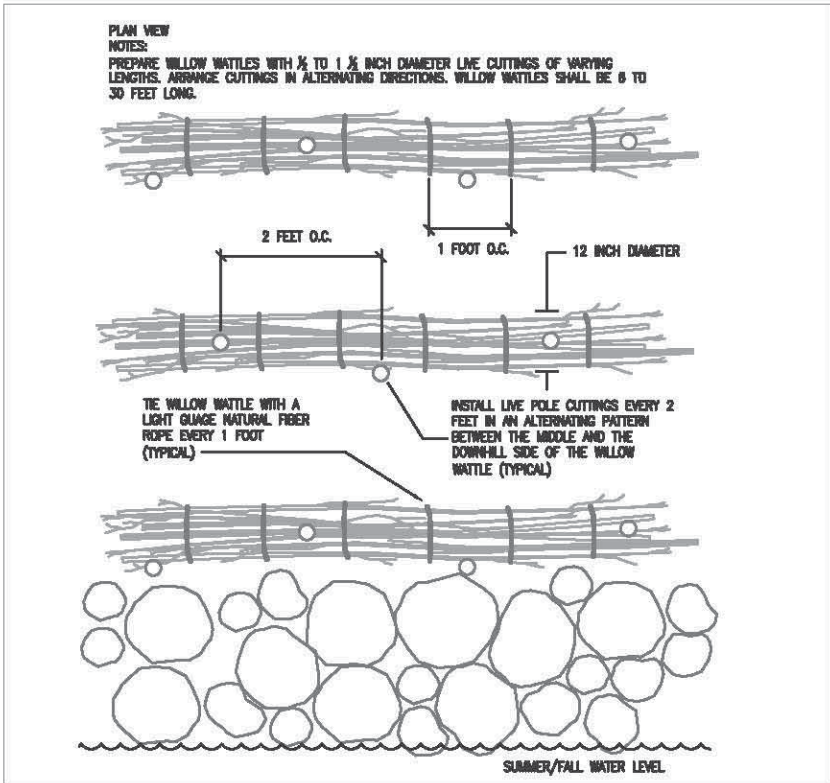
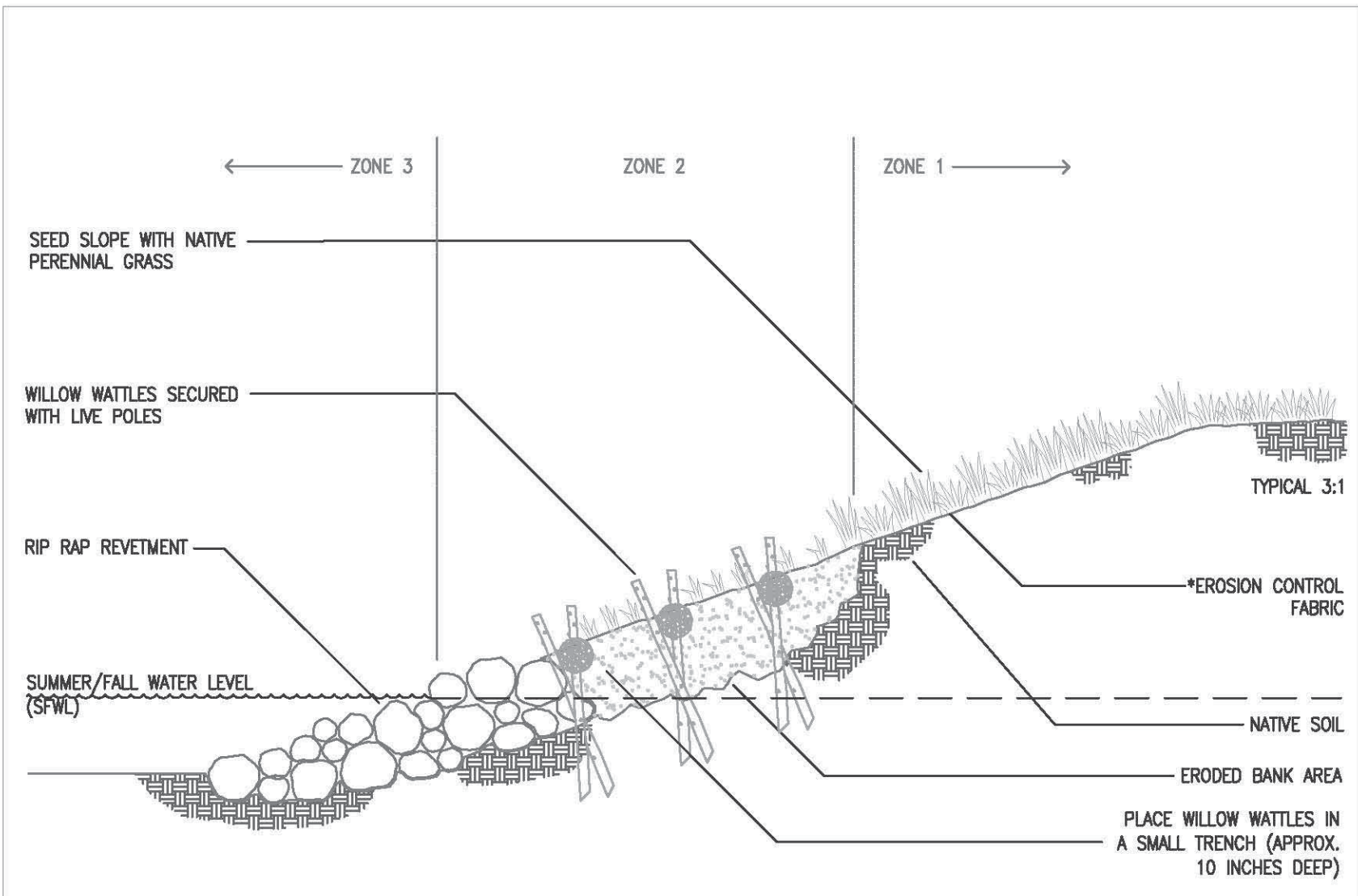
TEMPLATE 1:
BANK FILL ROCK SLOPE
WITH LIVE POLE
PLANTING

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale:	NOT TO SCALE
job no.:	08110038.14
drawn by:	VH
checked by:	LM

date: NOVEMBER 18, 2009



WILLOW WATTLE WITH ROCK TOE

Description and Application:
Willow wattles with rock toe is suitable for situations where erosion is primarily caused by runoff on the levee slope. Willow wattles provide protection from erosion caused by runoff on the levee slope, and the rock toe provides protection from erosive flows. Willow Wattle is suitable for shallow (e.g., 3:1) slopes in systems with low-velocity flows.
Maximum Slope: 2:1
Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).
Channel Location: Inner and outer banks.

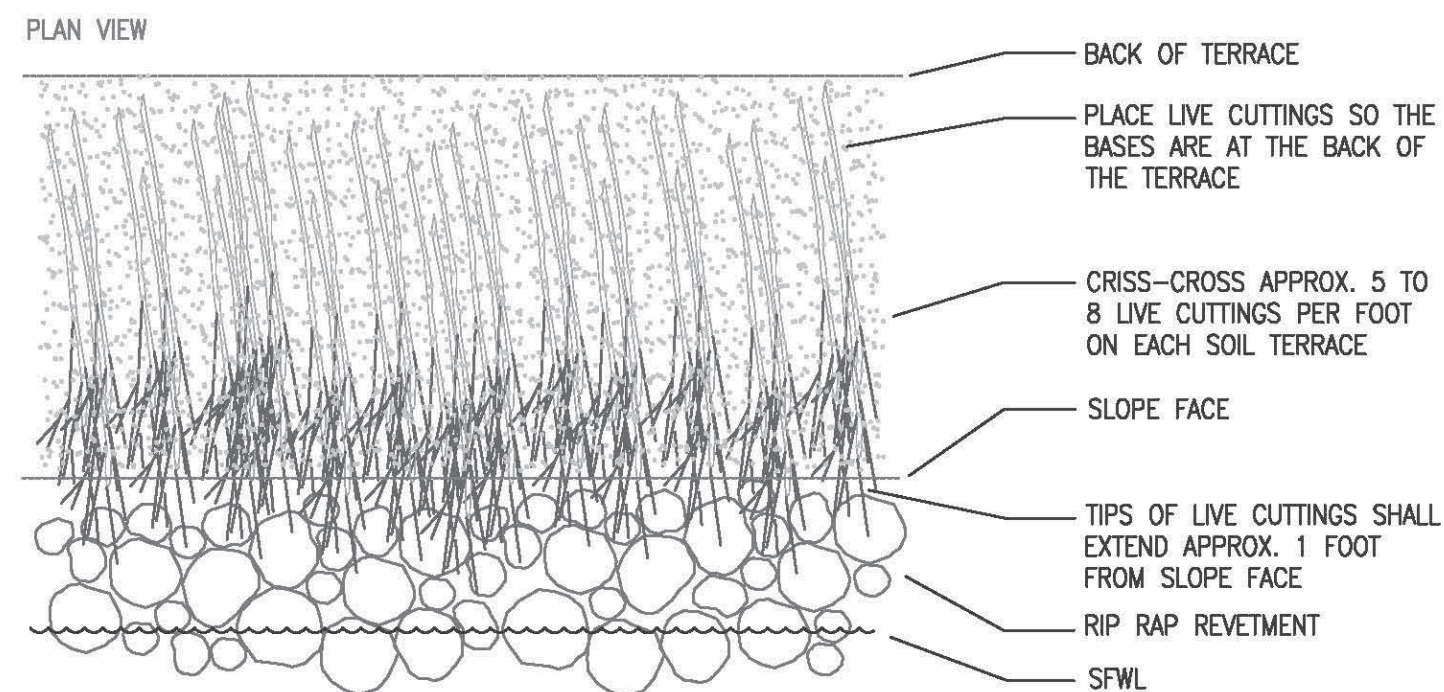
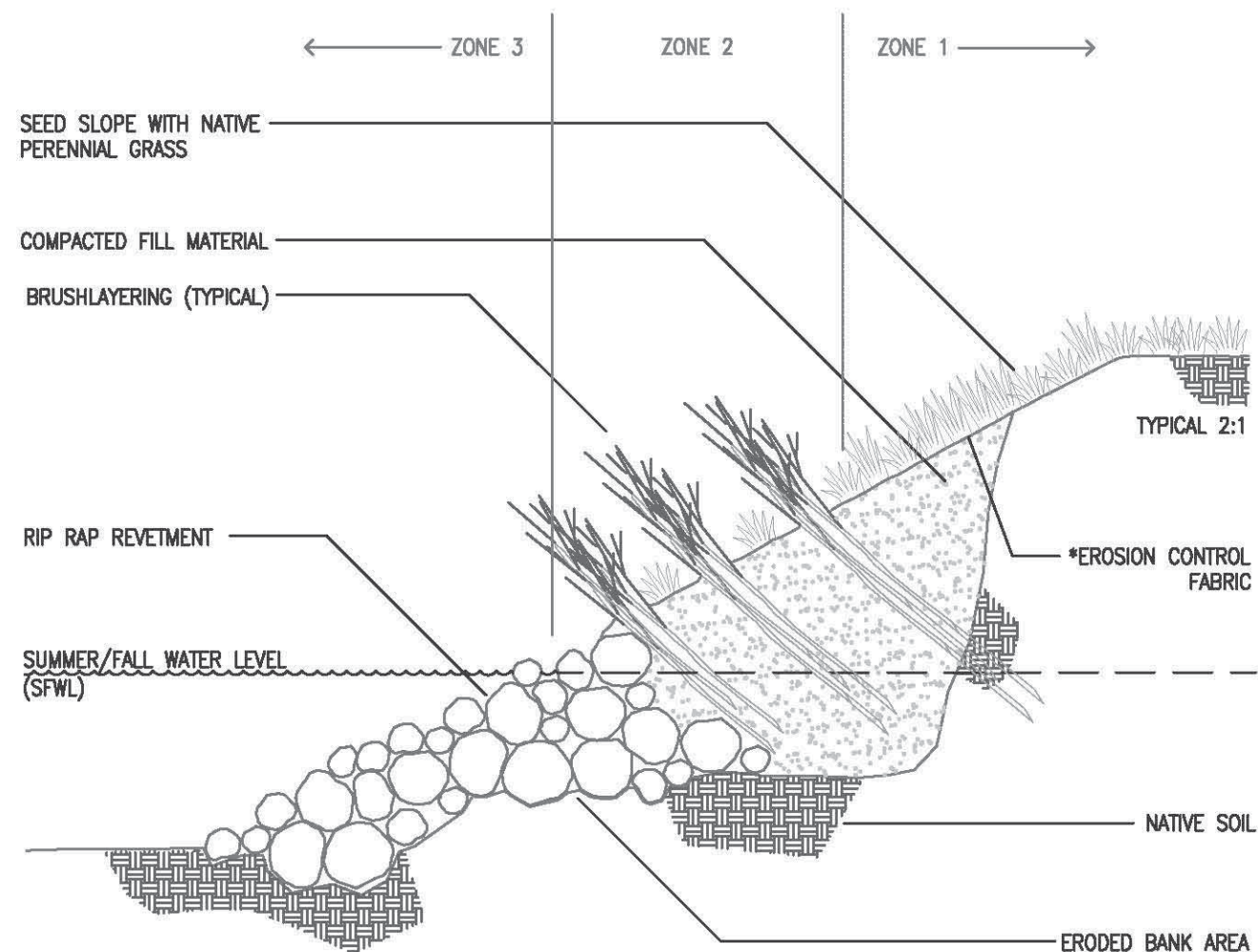
Limitations:
This technique is not suitable for flashy systems with high peak flows or frequently changing water surface elevations.

Construction Notes:
Rock rip rap material shall be placed from the toe of the slope to a point approximately 1'-2' above the SFWL. Willow wattles shall be placed in shallow trenches along the slope and secured with live pole cuttings. Live pole cuttings shall be installed in the center and at the downslope edge of the willow wattle.
To optimize growth, live woody cuttings should be harvested and installed during the dormant season (i.e., winter). Option: install sonotubes/steel pipes for follow-up winter planting. If live woody cuttings are harvested and installed during the growing season, the receiving site must have consistent water levels sufficient to maintain soil moisture that reaches the cuttings. Live woody cuttings shall be submerged in water for 1-7 days (24 hours min.) prior to installation.
Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:
Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.
Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.
Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:
Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:
The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.



BRANCHLAYERING

Description:

Branchlayering is layers of live woody cuttings placed in rows running parallel to the channel. The cuttings are installed perpendicular to the slope, between lifts of soil, so that only the tips of the cuttings remain exposed. Live woody cuttings provide protection from erosion caused by runoff on the levee slope, as well as erosion caused by wave action. Branchlayering is suitable for steeper (i.e., 1:1.5 – 2:1) slopes in systems with low-velocity flows.

Maximum Slope: 1.5:1

Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).

Channel Location: Inner and outer bends.

Limitations:

Branchlayering is not suitable for shallow slopes (e.g., 3:1) or upper levee banks.

Construction Notes:

Rock rip rap material shall be placed from the toe of the slope to a point approximately 1'–2' above the SFWL. Alternating layers of soil and live woody cuttings shall be placed on the rock rip rap above the SFWL. Each layer of live woody cuttings shall be watered before the next lift of soil is placed on top of it. To optimize growth, live woody cuttings should be harvested and installed during the dormant season (i.e., winter). Option: install sonotubes/steel pipes for follow-up winter planting. If live woody cuttings are harvested and installed during the growing season, the receiving site must have consistent water levels sufficient to maintain soil moisture that reaches the cuttings. Live woody cuttings shall be submerged in water for 1–7 days (24 hours min.) prior to installation. Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:

Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.

Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.

Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:

Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:

The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

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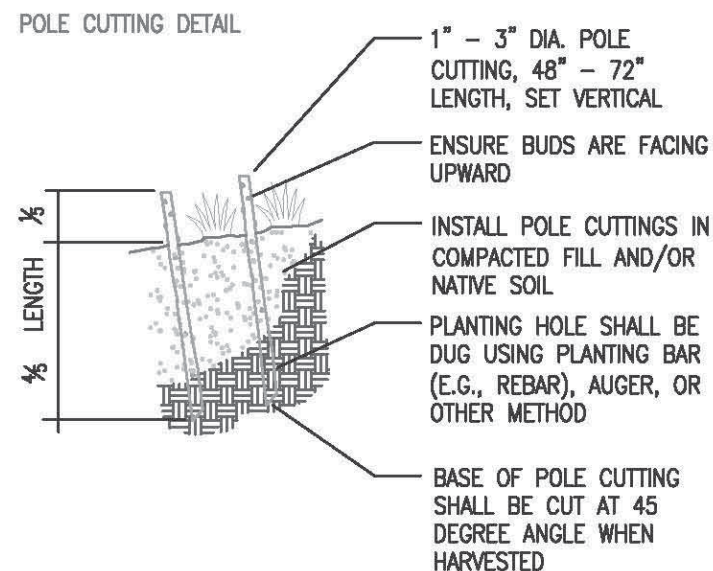
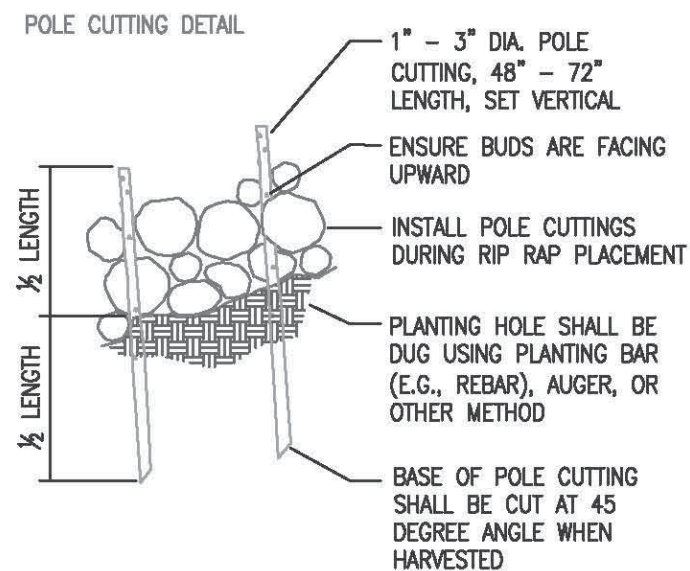
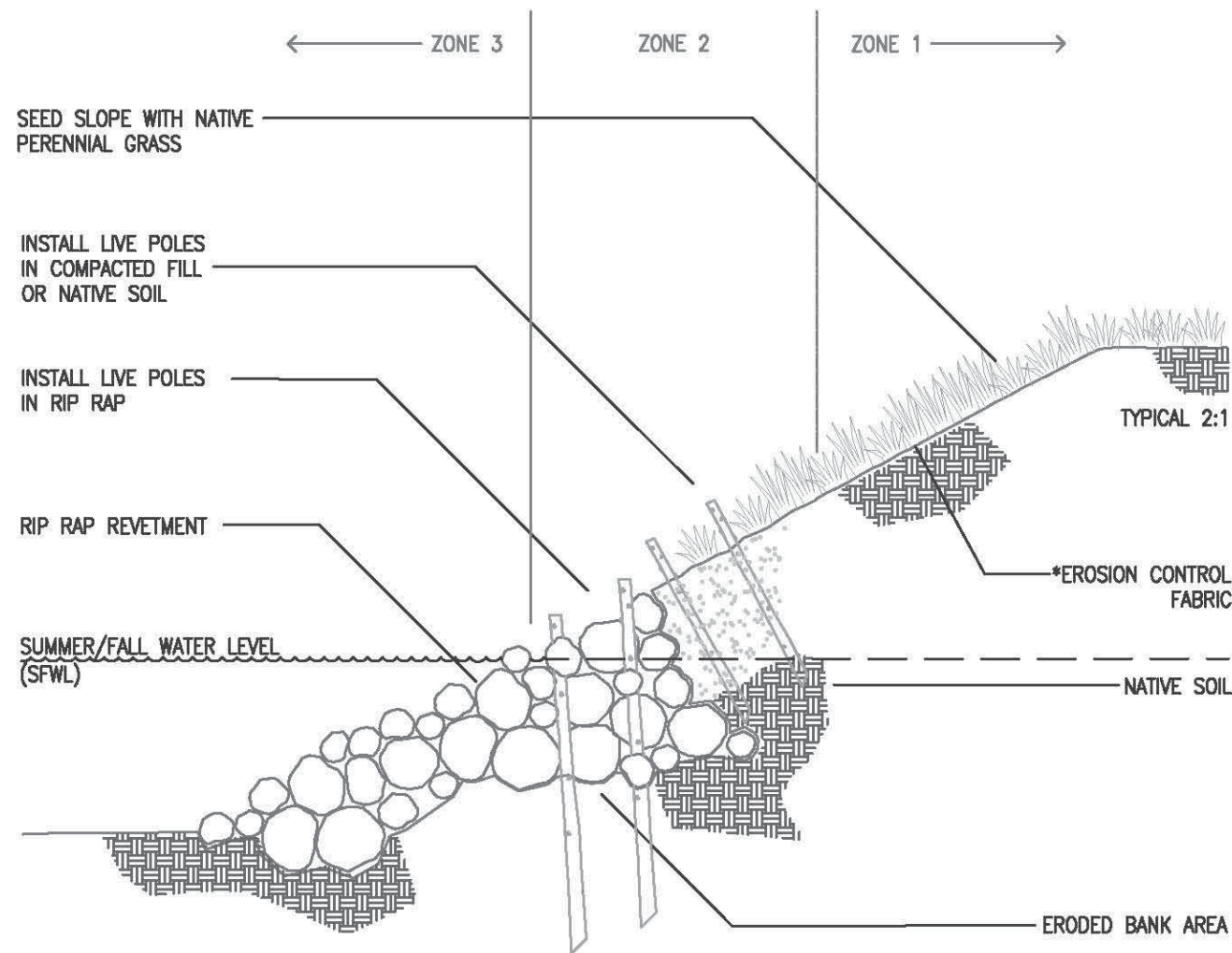
TEMPLATE 3
BRANCHLAYERING

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale: NOT TO SCALE
job no.: 08110038.14
drawn by: VH
checked by: LM

date: NOVEMBER 18, 2009



ROCK TOE WITH LIVE POLE PLANTING

Description and Application:

Rock toe with live pole planting is suitable for situations where typical flows cause erosion at the toe of the bank. Rock rip rap is placed in the eroded area and live pole cuttings are installed in the rip rap and compacted or native soil as soil moisture conditions allow. This technique creates a stable, vegetated bank toe and is suitable for banks on inner and outer bends.

Maximum Slope: 1:1

Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).

Channel Location: Inner and outer bends.

Limitations:

This technique is not suitable for flashy systems with high peak flows or frequently changing water surface elevations.

Construction Notes:

Rock rip rap material shall be placed from the toe of the slope to a point at minimum 1'-2' above the SFWL. Rock rip rap and soil mixture (70/30) shall be installed above the SFWL to facilitate vegetated growth.

To optimize growth, live woody cuttings should be harvested and installed during the dormant season (i.e., winter). Option: install sonotubes/steel pipes for follow-up winter planting. If live woody cuttings are harvested and installed during the growing season, the receiving site must have consistent water levels sufficient to maintain soil moisture that reaches the cuttings. Live woody cuttings shall be submerged in water for 1-7 days (24 hours min.) prior to installation. Basic steps for construction, including timing, sequencing, materials, equipment, etc. Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:

Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.

Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.

Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:

Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:

The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

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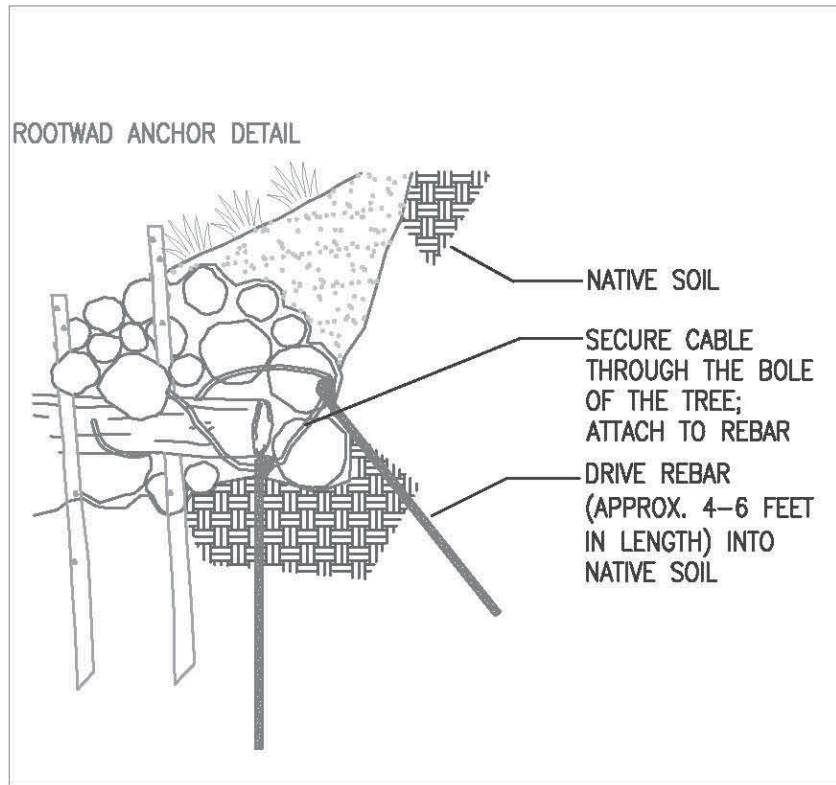
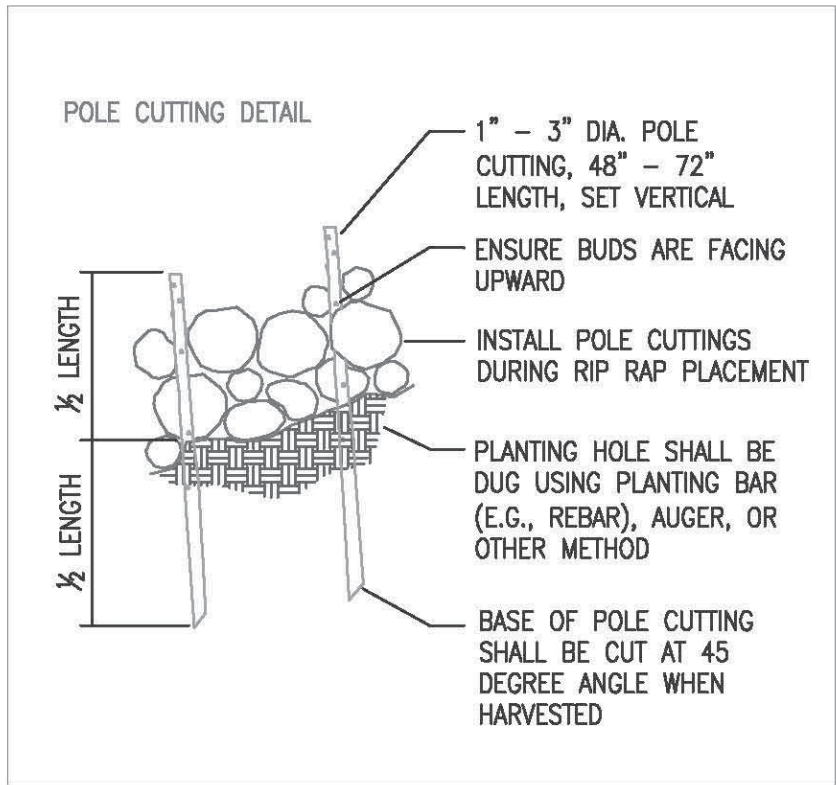
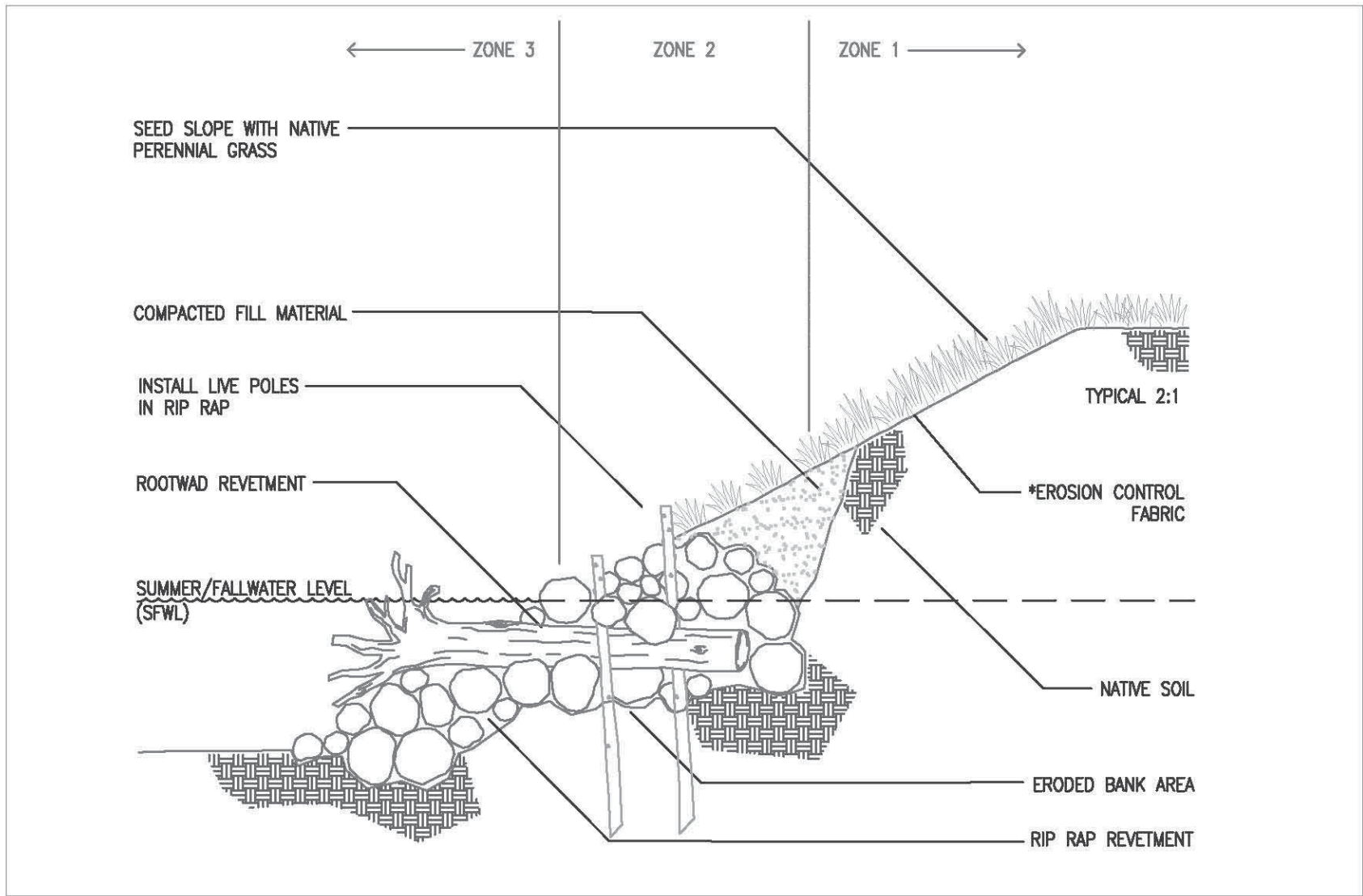
TEMPLATE 4:
ROCK TOE WITH LIVE
POLE PLANTING

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale: NOT TO SCALE
job no.: 08110038.14
drawn by: VH
checked by: LM

date: NOVEMBER 18, 2009



SOIL AND ROCK FILL AT THE BASE OF A FALLEN TREE (W/ ROOTWAD REVETMENT OPTION)

Description and Application:
 There are several repair options for levee banks damaged when a tree has fallen. These are typically small eroded areas. The eroded bank area can be filled with rock rip rap and planted with live pole cuttings. Above the SFWL soil can be mixed with the rock rip rap (30/70). In some cases, especially on outside bends, the fallen tree can be used as a rootwad revetment and flow deflector.
 Maximum Slope: 1.5:1
 Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).
 Channel Location: Inner and outer bends.

Limitations:
 Rootwad revetments may only be appropriate on natural banks, and should not be installed if there is potential for high flows to cause erosion behind the root fan.

Construction Notes:
 Rock rip rap material shall be placed from the toe of the slope to a point at minimum 1'-2' above the SFWL. Rock rip rap and soil mixture (70/30) shall be installed above the SFWL to facilitate vegetated growth. To optimize growth, live pole cuttings should be harvested and installed during the dormant season (i.e., winter). Option: install sonotubes/steel pipes for follow-up winter planting. If live pole cuttings are harvested and installed during the growing season, the receiving site must have consistent water levels sufficient to maintain soil moisture that reaches the cuttings. Live woody cuttings shall be submerged in water for 1-7 days (24 hours min.) prior to installation. If conditions allow, the fallen tree shall be pruned and used as a rootwad revetment. The root fan shall be situated to deflect flows downstream. The rootwad shall be anchored into the bank. Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:
 Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric. Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone. Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:
 Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:
 The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

California Department of
Water Resources

Small Erosion Repair Program

2022 J Street
Sacramento CA 95811
Tel: (916) 414-5800
Fax: (916) 414-5850

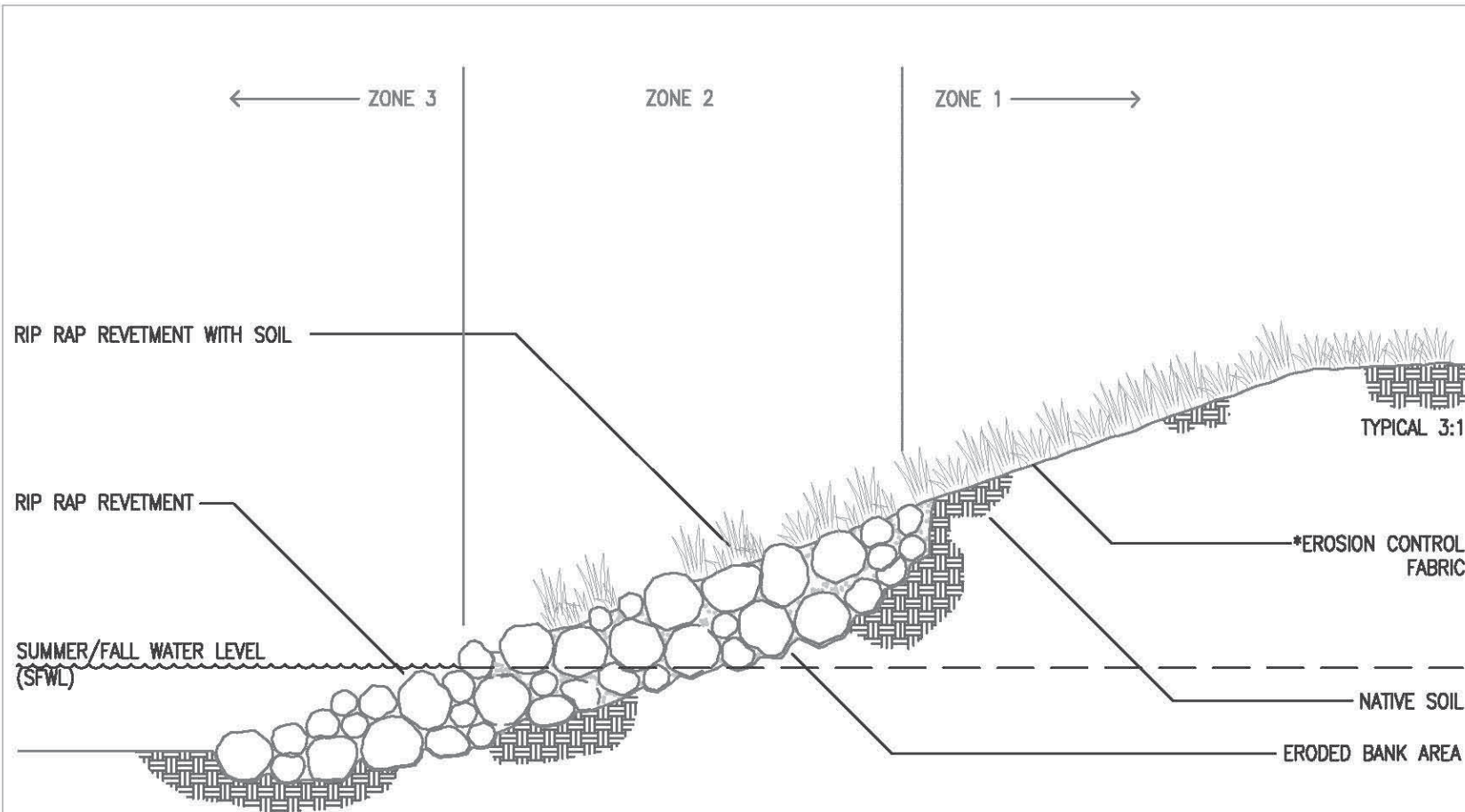
TEMPLATE 5
SOIL AND ROCK FILL AT
THE BASE OF A FALLEN
TREE (W/ ROOTWAD
REVETMENT OPTION)

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale: NOT TO SCALE
 job no.: 08110038.14
 drawn by: VH
 checked by: LM

date: NOVEMBER 18, 2009



BANK FILL ROCK SLOPE WITH NATIVE GRASS PLANTING

Description and Application: Bank fill rock slope with native grass planting is suitable for situations where significant bank erosion has occurred. Rock rip rap and a mix of soil (70/30) is placed in the eroded area and grasses are installed on top. This technique creates a stable, vegetated bank toe and is suitable for banks on inner and outer bends.

Maximum Slope: 1:1

Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).

Channel Location: Inner and outer bends.

Limitations:

Native grass plantings may not be suitable for flashy systems with high peak flows.

Construction Notes:

Rock rip rap material shall be placed from the toe of the slope to a point at minimum 1'–2' above the SFWL. Rock rip rap and soil mixture (70/30) shall be installed above the SFWL to facilitate vegetated growth.

Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:

Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.

Zone 2 – this is the primary woody vegetation planting zone. This zone extends from the SFWL upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.

Zone 3 – this zone extends from the channel bottom up to the SFWL. Live woody cuttings and emergent vegetation may be planted in this zone.

Plant List and Seed Mix:

Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:

The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

California Department of
Water Resources

Small Erosion Repair Program

2022 J Street
Sacramento CA 95811
Tel: (916) 414-5800
Fax: (916) 414-5850

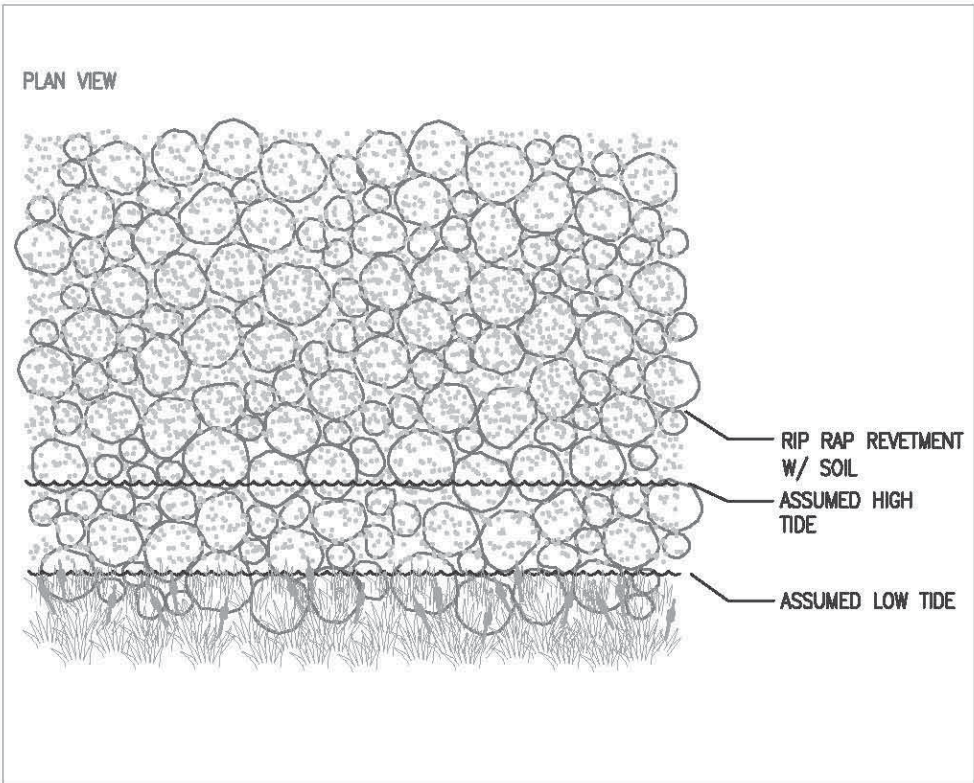
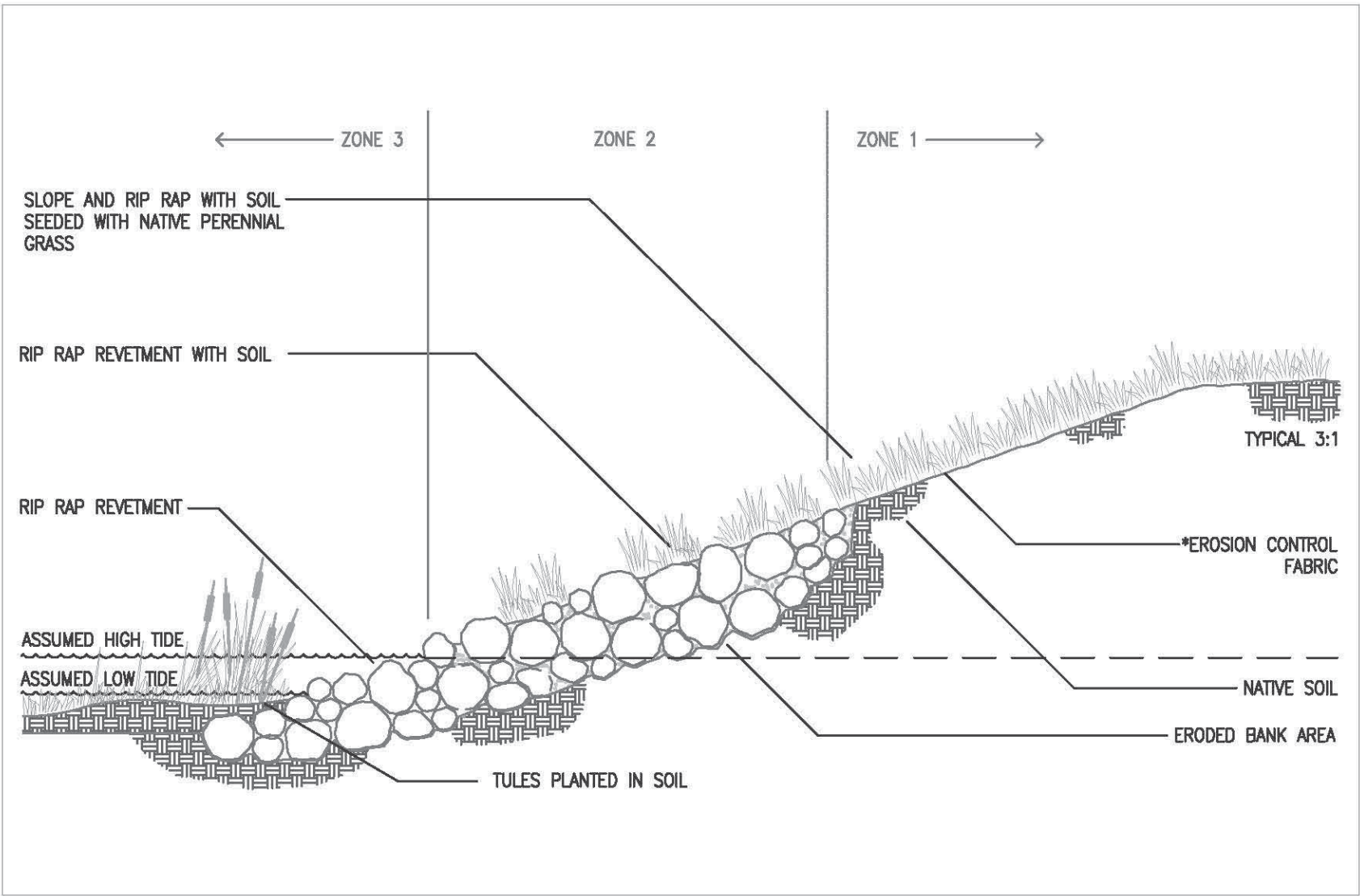
TEMPLATE 6:
BANK FILL ROCK SLOPE
WITH NATIVE GRASS
PLANTING

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale:	NOT TO SCALE
job no.:	08110038.14
drawn by:	VH
checked by:	LM

date: NOVEMBER 18, 2009



BANK FILL ROCK SLOPE WITH EMERGENT VEGETATION PLANTING

Description and Application: Bank fill rock slope with emergent vegetation planting is suitable for situations where significant bank erosion has occurred. Rock rip rap and a mix of soil (70/30) is placed in the eroded area and emergent vegetation is installed typically below low toe. This technique creates a stable, vegetated bank toe and protected middle and upper bank.

Maximum Slope: 1:1
Maximum Velocity: Project specific – determined by project engineer specification for rock size (see Rock Sizing below).
Channel Location: Inner and outer bends

Limitations:
For use typically where flatter (10:1) areas allow for emergent vegetation planting.

Construction Notes:
Rock rip rap material shall be placed from just below the low tide point to a point at minimum 1'–2' above the high tide. Rock rip rap and soil mixture (70/30) shall be installed above high tide to facilitate vegetated growth. Disturbed soil shall be seeded with a native perennial grass seed mix (broadcast or hydroseed). When surface vegetation is native species, consider stockpiling topsoil for replacement after construction.

Planting Zones:
Zone 1 – this zone extends from the top of the levee downslope a minimum of 20'. The lower extent of Zone 1 is determined by the upper extent of Zone 2 (described below). This zone shall be seeded with native perennial grasses. Woody vegetation shall not be planted in Zone 1. *Use non-monofilament wildlife-safe erosion control fabric.
Zone 2 – this zone extends from the high tide upslope to the point live woody cutting growth would be limited by lack of soil moisture. Live woody cuttings and native perennial grasses may be planted in this zone.
Zone 3 – this zone extends from the channel bottom up to the high tide. Emergent vegetation may be planted in this zone.

Plant List and Seed Mix:
Project-specific plant species and seed mixes will be selected from the plant list included in Section C, "Project Design Templates and Construction Details." Species selection will be based on site conditions including location in the watershed, location on the levee slope, compatibility with vegetation up and downstream, and requirements for compliance with the vegetation inspection criteria for standard levees as described in Section C.

Rock Sizing:
The project engineer will use the rock sizing chart included in Section C as a guide to determine appropriate rock size and weight based on local scour velocities, with adjustments for bank angle, bend hydraulics, stability factors and safety coefficients.

California Department of
Water Resources

Small Erosion Repair Program

2022 J Street
Sacramento CA 95811
Tel: (916) 414-5800
Fax: (916) 414-5850

TEMPLATE 7:
BANK FILL ROCK SLOPE
WITH EMERGENT
VEGETATION PLANTING

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

scale: NOT TO SCALE
job no.: 08110038.14
drawn by: VH
checked by: LM

date: NOVEMBER 18, 2009

SUMMARY OF SCOPING COMMENTS FOR THE SMALL EROSION REPAIR PROGRAM ENVIRONMENTAL IMPACT REPORT

I. OVERVIEW

This document is a summary of comments received by the California Department of Water Resources (DWR) during the scoping process mandated under the California Environmental Quality Act (CEQA) for the Small Erosion Repair Program (SERP). These comments were provided in writing during the 30-day scoping period, which closed on December 28, 2009.

The SERP would provide a streamlined program for DWR to identify, obtain regulatory authorization for, and construct small levee repairs on levees maintained by DWR within the Sacramento River Flood Control Project (SRFCP). The initial focus (Phase 1) of the SERP represents approximately 306 miles of levees and represents an initial 5-year effort. After the Phase 1 implementation period, the Interagency Flood Management Collaborative Program Group (Interagency Collaborative Group) intends to evaluate the program's success and, if warranted, the SERP may be expanded in the future (following additional environmental review) to include additional sites outside of the Phase 1 coverage area, that would be repaired by the local maintaining agencies throughout the Sacramento–San Joaquin Drainage District, which includes the Sacramento and San Joaquin Rivers and their tributaries as well as the area along the general course of the Sacramento and San Joaquin Rivers.

II. SCOPING PROCESS

In accordance with CEQA (Public Resources Code section 21000 et seq.) and the State CEQA Guidelines (Title 14 of the California Code of Regulations section 15000 et seq.), DWR issued a notice of preparation (NOP) of a program environmental impact report (EIR) to solicit input regarding the potential environmental effects of implementing the SERP. In accordance with State CEQA Guidelines section 15064(a), an EIR must be prepared if substantial evidence exists that a project may have a significant effect on the environment. DWR determined that an EIR will be prepared for this project. For this reason, an NOP was issued, accompanied by an initial study (IS) that identified several environmental topics that would not incur significant effects if SERP was implemented; those environmental topics were not considered further in the EIR.

The NOP/IS was available for a 30-day public review period beginning on November 30, 2009, and ending on December 29, 2009. During the public review period, a public scoping meeting was held to inform agencies and the public about the proposed project and to provide the public with an opportunity to comment on the NOP and issues to be evaluated in the EIR. The meeting was held at 1:30 p.m. on December 15, 2009, at the California Department of Water Resources, Division of Flood Management, 3310 El Camino Avenue, Sacramento, California.

III. INFORMATION ABOUT PUBLIC COMMENTS AND COMMENTERS

Table 1 identifies the state and local agencies and organizations that provided written comments on the NOP/IS. Four letters were received; they are provided in Appendix A.

Table 1
Comments Letters Received
During the NOP Scoping Period for the SERP (April 17–May 29, 2008)

Agency	Commenter	Date
Central Valley Flood Protection Board (CVFPB)	James Herota, Staff Environmental Scientist, Floodway Protection Section	December 16, 2009
California Department of Fish and Game (DFG)	Jeff Drongesen, Acting Environmental Program Manager	December 22, 2009
California Department of Transportation (Caltrans)	Sukhvinder Takhar	December 2, 2009
California State Lands Commission (SLC)	Marina R. Brand, Acting Chief, Division of Environmental Planning and Management	December 15, 2009

IV. SUMMARY OF PUBLIC COMMENTS

Table 2 lists the agency providing the comment, a summary of the comments submitted, and the chapter and/or section of the DEIR where the comment will be addressed.

Table 2
Summary of Comments

Commenter	Summary	Where Addressed in DEIR
CVFPB	The project is within the jurisdiction of the CVFPB because it falls within the geographic region where the CVFPB is empowered to provide flood protection and regulate work on levees (23 CCR 2).	Chapter 1, "Introduction"
CVFPB	Permits from the CVFPB required for any construction or repair work on levees within this region covered under an adopted flood control plan (23 CCR 6).	Chapter 1, "Introduction"
CVFPB	Planting of vegetation on levees under the jurisdiction of the CVFPB is subject to the standards that the CVFPB enforces for encroachment management within flood control projects or levees governed by adopted flood control plans (23 CCR 131). Standards require submitting detailed plans for approval by the CVFPB. See http://www.cvfpb.ca.gov for forms for permitting.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"

Table 2 Summary of Comments		
Commenter	Summary	Where Addressed in DEIR
DFG	Address impacts on fish and wildlife and their habitat, including special-status species and permitting.	Chapter 3, Section 3.2, "Biological Resources"
DFG	Address impacts on wetland habitat and mitigation to ensure no net loss of wetlands.	Chapter 3, Section 3.2, "Biological Resources"
DFG	Address growth-inducing and cumulative impacts on fish, wildlife, water quality, and vegetation.	Chapter 3, Section 3.2, "Biological Resources"; Chapter 5, Section 5.1, "Cumulative Impacts" and Section 5.2, "Growth-Inducing Impacts"
DFG	Analyze specific alternatives that reduce impacts on fish, wildlife, water quality, and vegetation resources.	Chapter 3, Section 3.2, "Biological Resources"; Chapter 4, "Alternatives to the Proposed Project"
DFG	Evaluate project consistency with relevant land use planning documents including general and specific plans, watershed master plans, habit conservation plans, natural community conservation plans, and existing USACE permits and USFWS biological opinions.	Chapter 1, "Introduction" (also addressed in Appendix A, "Notice of Preparation and Initial Study," of the EIR
DFG	Evaluate direct and indirect impacts on each site where work will be performed that covers all required activities associated with erosion repair.	Chapter 3, "Environmental Impact Analysis"
DFG	Provide methods for analyzing how a proposed design will provide a cumulative net benefit to fish and wildlife resources and habitat for native species.	Chapter 3, Section 3.2, "Biological Resources"; also addressed in SERP Manual and permit applications
DFG	Address the potential of the project to result in alteration of the bed, bank, or channel of water bodies requiring a permit per Section 1600 of the California Fish and Game Code. If a permit is required for such activity then the EIR should address whether mitigation would reduce the impacts of such activity [see specific measures listed by DFG]	Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit applications
DFG	DFG requests written notice of the proposed and pending actions under the project per PRC sections 21089 and 21092.2.	Chapter 1, "Introduction"

Table 2 Summary of Comments		
Commenter	Summary	Where Addressed in DEIR
DFG	If the project would have an impact on fish or wildlife habitat, an assessment of fees per PRC 21089 and California Fish and Game Code Section 711.4 is necessary. Fees are payable at the time of filing for the Notice of Determination under CEQA.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"
Caltrans	All work within the state right-of-way must be in accordance with Caltrans's standards and requires a Caltrans Encroachment Permit before beginning construction, surveying, or other activities in the right-of-way.	Chapter 2, "Project Description"
SLC	SLC owns in fee the submerged land under tidally influenced waters up to the mean high-tide line in its natural state. The SLC also owns in fee the submerged land under nontidally influenced lands up to the ordinary low-water mark, with a public trust easement up to the ordinary high-water mark in its natural state. SERP activities would occur on such lands and will require a lease.	Chapter 1, "Introduction"
SLC	SLC is also a responsible agency under CEQA.	Chapter 1, "Introduction"
SLC	CVFPB encroachment and geotechnical reporting is required for the proposed work.	Chapter 1, "Introduction"
SLC	Rivers and Harbors Act Section 408 authorization from USACE is required.	Chapter 1, "Introduction"; also addressed in permit applications
SLC	Coordinate with USACE regarding the appropriate palette of vegetation for plantings for erosion repair.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit applications
SLC	Rivers and Harbors Act Section 10 authorization from USACE is required.	Chapter 1, "Introduction"
SLC	Section 404 permitting from USACE is required.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit applications

Table 2 Summary of Comments		
Commenter	Summary	Where Addressed in DEIR
SLC	DFG Section 1600 permitting is required.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit applications
SLC	RWQCB Section 401 certification is required.	Chapter 1, "Introduction"; Chapter 3, Section 3.5, "Hydrology and Water Quality"; also addressed in permit application
SLC	The project may reduce riparian vegetation, especially vegetation that contributes to shaded riverine aquatic habitat, with indirect impacts on salmonids and avian species, and water quality impacts. DWR should coordinate with relevant agencies and stakeholders (DFG, USFWS, NMFS, and adjoining landowners) to address and minimize these impacts.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; Section 3.5, "Hydrology and Water Quality"; also addressed in permit application
SLC	DWR should perform appropriate technical studies and coordination with USFWS and DFG to comply with the federal Endangered Species Act and California Endangered Species Act. After consultation, DWR should perform appropriate mitigation and monitoring to minimize impacts and meet permit conditions.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit application
SLC	The EIR should provide appropriate prevention measures to avoid creating impacts caused by introduction of invasive species during SERP implementation. Permitting requirements such as the USACE Clean Water Act section 404 permitting program requires aquatic invasive species prevention programs. In addition, DWR should analyze the potential of the project to create or exacerbate conditions that favor invasive species in the relevant waterways.	Chapter 1, "Introduction"; Chapter 3, Section 3.2, "Biological Resources"; also addressed in permit application

Table 2
Summary of Comments

Commenter	Summary	Where Addressed in DEIR
SLC	The EIR should analyze the noise and vibration impacts on special-status species and the integrity of the levees themselves. The EIR should specifically address the potential for vibration to result in liquefaction that could affect the structural integrity of project levees.	Chapter 1, "Introduction"; Chapter 3, Section 3.6, "Noise"
SLC	The EIR should also address the emissions and potential impacts of GHGs consistently with the Global Warming Solutions Act, via appropriate modeling tools such as URBEMIS. The relevant analysis should also address cumulative impacts associated with GHG emissions.	Chapter 3, Section 3.1, "Air Quality"; Chapter 5, Section 5.1, "Cumulative Impacts" (GHG portion of air quality cumulative analysis)
SLC	The EIR should address impacts on recreational opportunities and resources and appropriate mitigation such as alternative access routes where SERP activities would obstruct access.	Chapter 1, "Introduction"; also addressed in NOP/IS
SLC	The EIR should assess the potential of the project to affect submerged cultural resources including shipwrecks. The SLC maintains a database of shipwrecks that should be consulted as relevant. The SLC must provide permits for the salvage of cultural resources on submerged lands under their jurisdiction as provided for in PRC Section 6309.	Chapter 3, Section 3.3, "Cultural Resources"
SLC	The EIR should also address transportation impacts and appropriate mitigation, including analysis of impacts on local residents.	Chapter 1, "Introduction"; also addressed in NOP/IS

Note: Caltrans = California Department of Transportation; CCR = California Code of Regulation; CVFPB = Central Valley Flood Protection Board; DFG = California Department of Fish and Game; DWR = California Department of Water Resources; EIR = environmental impact report; GHG = greenhouse gas; NMFS = National Marine Fisheries Service; PRC = Public Resources Code; SLC= California State Lands Commission; USACE = U.S. Army Corps of Engineers; USFWS = U.S. Fish and Wildlife Service.

Source: AECOM 2010

CENTRAL VALLEY FLOOD PROTECTION BOARD

3310 El Camino Ave., Rm. LL40
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682



December 16, 2009

Jeff Schuette
California Department of Water Resources
3310 El Camino Avenue, Suite 100
Sacramento, CA 95821

Dear Mr. Schuette:

State Clearinghouse (SCH) Number: 2009112088
Small Erosion Repair Program
NOP - Notice of Preparation

Staff for the Central Valley Flood Protection Board has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2).

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

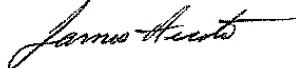
- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (CCR Section 6);
- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);
- Vegetation plantings will require the submission of detailed design drawings; identification of vegetation type; plant and tree names (i.e. common name and scientific name); total number of each type of plant and tree; planting spacing and irrigation method that will be within the project area; a complete vegetative management plan for maintenance to prevent the interference with flood control, levee maintenance, inspection and flood fight procedures (Title 23, California Code of Regulations CCR Section 131).

December 16, 2009
Jeff Schuette
Page 2 of 2

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at <http://www.cvfpb.ca.gov/>. Contact your local, federal and state agencies, as other permits may apply.

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

Sincerely,



James Herota
Staff Environmental Scientist
Floodway Protection Section

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

CVFPB Comment Letter Cited Sections (Title 23 Cal. Code of Regulations) available online here:

[LINK](#)

23 CCR § 2. Purpose, Scope.

(a) The purpose of these regulations is to carry out the board's [CVFPB] duties pursuant to Water Code sections 8534, 8608 and 8710 - 8723. Under these statutes, the Board is required to enforce, within its jurisdiction, on behalf of the State of California, appropriate standards for the construction, maintenance, and protection of adopted flood control plans that will best protect the public from floods.

(b) The area of the board's jurisdiction includes the entire Central Valley, including all tributaries and distributaries of the Sacramento and San Joaquin Rivers and Tulare and Buena Vista basins.

(c) This division does not apply to the construction, operation, or maintenance of the Central Valley Project or the State Water Resources Development System or any parts thereof.

(d) This division does not apply to any activities of the United States or its agencies.

23 CCR § 6. Need for a Permit.

(a) Every proposal or plan of work, including the placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment or works of any kind, and including the planting, excavation, or removal of vegetation, and any repair or maintenance that involves cutting into the levee, wholly or in part within any area for which there is an adopted plan of flood control, must be approved by the board [CVFPB] prior to commencement of work.

(b) Permits may be required by the board for existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised.

(c) Every proposal or plan of work described in subdivision (a), but located outside an area over which there is an adopted plan of flood control, must be submitted to the board for approval prior to commencement of work if it is foreseeable that the plan of work could be injurious to or interfere with the successful execution, functioning, or operation of any facilities of an adopted plan of flood control or of a plan under study. If in the judgment of the Executive Officer, the plan of work is determined to be injurious to or interfere with an adopted plan of flood control or of a plan under study, the plan of work would be subject to requirements of this division.

(d) Permits are not required for maintenance activities as defined in article 2, section 4 of this title.

(e) The Executive Officer may waive the requirement for a permit for minor alterations within an adopted plan of flood control that would not be injurious to the adopted plan of flood control.

<General Materials (GM) - References, Annotations, or Tables>

Note: Authority cited: Section 8571, Water Code. Reference: Sections 8608 and 8710, Water Code.

23 CCR § 111. Introduction to Standards [not cited, but relevant].

These standards govern the design and construction of encroachments which affect the flood control works and floodways and are used by the board for the regulation of encroachments. The standards apply to any work within the limits of, or which can affect, any authorized flood control project or any adopted plan of flood control. These standards also provide the public with information needed to prepare and submit encroachment applications to the board. Where any provision in this division requires the application of judgment, such as where "practical," "feasible," or "reasonable," the burden of proof on such issues as impracticality, unfeasibility, or unreasonableness lies with the applicant or permittee.

23 CCR § 131. Vegetation. [see section for full citation, including plans and discussion of specific taxa here: [LINK](#)]

(a) The following definitions apply to this section:

(1) Oversize levee. "Oversize levee" means a levee which encompasses the minimum oversized levee cross-section which has a width of thirty (30) feet at design freeboard elevation and standard levee slopes. (See Figure 8.10.)

(2) Standard size levee. "Standard size levee" means a levee which does not meet the requirements for an oversize levee.

(3) Standard levee slopes. "Standard levee slopes" means the landside levee slope is two (2) horizontal feet to one (1) vertical foot and the waterside levee slope is three (3) horizontal feet to one (1) vertical foot.

(b) Suitable vegetation, if properly maintained, is permitted within an adopted plan of flood control.

(c) Vegetation must not interfere with the integrity of the adopted plan of flood control, or interfere with maintenance, inspection, and flood fight procedures.

(d) With the exception of naturally occurring vegetation which the owner of the underlying land has no responsibility to maintain, any vegetation which interferes with the successful execution, functioning, maintenance or operation of the adopted plan of flood control, must be removed by the owner. If the owner does not remove such vegetation upon request, the board reserves the right to have the vegetation removed at the owner's expense.

(e) Tables 8.3 through 8.6 indicate common types of vegetation considered suitable and unsuitable for planting on levees. Other types of vegetation, not listed in Tables 8.3 through 8.6,

may be approved if determined to be similar to listed suitable species or not detrimental to the integrity, operation, or maintenance of the adopted plan of flood control.

(f) Vegetation and vegetation maintenance standards for levees are as follows:

(1) Vegetation is not permitted on the levee crown roadway. Only properly maintained grasses or suitable ground covers are permitted on other portions of the levee crown.

(2) Vegetation growing on levee slopes but infringing onto the levee crown must be trimmed or sprayed to prevent interference with flood fight, maintenance, or inspection activities.

(3) Tree branches extending above the levee crown or above the area within ten (10) feet of the levee toe, must be pruned to maintain a minimum of twelve (12) feet vertical clearance above the levee crown and above the area within ten (10) feet of the levee toe.

(4) Tree branches above levee slopes must be pruned and maintained so that the distance from the levee slope to the lowest branches, measured normal to the levee slope, is a minimum of five (5) feet.

(5) Trees are not permitted on the crown or slopes of a standard size levee or within ten (10) feet of the toe of a standard or oversize levee. Planted trees must be set back a sufficient distance from the levee toe to conform with the requirements of subdivision (f)(3) of this section throughout the life of the tree.

(6) Trees are permitted on oversize levee slopes according to the following additional criteria:

(A) Trees considered suitable and unsuitable for oversize levees are listed in Tables 8.3 and 8.4 respectively.

(B) Trees which will exceed fifty (50) feet in height when mature are not permitted.

(C) Trees are permitted on the waterside levee slope of oversize levees up to a point five (5) vertical feet below the design flood plane.

(D) Trees that, in the judgment of the board, threaten to disturb revetment on levee slopes or interfere with maintenance must be removed.

(E) Fruit and nut trees are not allowed.

(7) Trees, vines, bushes, shrubs, or any other form of woody or herbaceous vegetation that grow in a dense form and prevent visual inspection of the levee slope and toe, produce fruit or nuts that attract burrowing rodents, or are thorny and could interfere with flood fight efforts, are not permitted on the levee or within ten (10) feet of the levee toe.

(8) Sod, grasses, perennial flowers, and other nonwoody ground covers are permitted on levee slopes and within ten (10) feet of the levee toe if the height of the vegetation does not exceed twelve (12) inches. Ground covers considered suitable and unsuitable on levee slopes and within

ten (10) feet of the levee toe are listed in Tables 8.5 and 8.6, respectively. In areas where vehicular access is maintained along the levee toe, ground covers are generally not permitted.

For ground covers with specific maintenance requirements (see Table 8.5):

- (A) The permittee is responsible for maintaining the ground cover at a height less than one (1) foot;
- (B) The maintaining agency reserves the right to mow the groundcover without prior notification if the height exceeds one (1) foot;
- (C) Any irrigation system for the ground cover must be designed to not interfere with mowing;
- (D) Ground covers that are required by this subdivision to be mowed are generally allowed only on the upper twenty (20) feet of levee slope.
- (9) Thick-stemmed, extremely dense or woody ground covers are not permitted on levee slopes or within ten (10) feet of the levee toe.
- (10) Flower gardens where the height of the vegetation does not exceed twelve (12) inches and which are compatible with flood fight procedures, maintenance, and inspection programs are permitted within ten (10) feet of the levee toe.
- (g) Vegetation and vegetation maintenance standards for floodways and bypasses are as follows:
 - (1) Vegetation is permitted within revetment on streambanks unless, in the judgment of the board, it becomes a threat to the integrity of the revetment.
 - (2) Invasive or difficult-to-control vegetation, whether naturally occurring or planted, that impedes or misdirects floodflows is not permitted to remain on a berm or within the floodway or bypass.
 - (3) The board may require clearing and/or pruning of trees and shrubs planted within floodways in order to minimize obstruction of floodflows.
 - (4) Trees and brush that have been cut down must be burned or removed from the floodway prior to the flood season.
- (h) Orchards are not permitted within bypasses but may be planted within other floodways in accordance with the following criteria:
 - (1) If an orchard is abandoned, all trees must be removed and burned or disposed of outside the floodway prior to flood season.
 - (2) Trees or brush cut prior to planting an orchard must be removed and burned or disposed of outside the floodway prior to flood season.

(3) Orchard cuttings and any debris that may accumulate in the orchard during the flood season must be removed from the floodway, or must be disposed of in such a manner as to leave no floatable debris within the floodway. Cuttings and other debris must regularly be burned or removed and disposed of outside the floodway throughout pruning activities so as to leave no floatable debris within the floodway.

(4) Dead trees, stumps, prunings, or other agricultural debris may not be placed on the levee section or within ten (10) feet of the levee toe.

(5) Tree rows must be parallel to the direction of the overbank flow and may not direct the flow toward the levee.

(6) The spacing between rows must be a minimum of sixteen (16) feet perpendicular to the overbank flow of the stream. The row spacing must be increased if, in the judgment of the board, additional space is necessary for the passage of floodflows.

(i) Vegetable gardens are not permitted on the levee slope. Vegetable gardens may be permitted within ten (10) feet of the levee toe where they will not interfere with maintenance and inspection and meet the following conditions:

(1) No large bushy plants such as corn, tomatoes, grapes and peas are within ten (10) feet of the levee toe;

(2) There is not a maintenance access road along the levee toe;

(3) The adjacent levee slope is not sprayed with herbicide by the maintaining agency; and

(4) The levee is not experiencing burrowing rodent activity. If there is burrowing rodent activity in the immediate vicinity, the vegetable garden permittee shall control the rodents to the satisfaction of the Board or remove the garden.

(j) Irrigation of vegetation on levee slopes must conform to the following criteria:

(1) Permanently installed irrigation systems are permitted on both slopes of oversize levees and on the landside slope of standard size levees.

(2) Surface low pressure drip irrigation systems may be used on either the landside or waterside levee slope.

(3) Any water applied to vegetation on the levee slope by any means must be controlled to prevent erosion of the levee slope.

(4) Ditches may not be dug in the levee section, within ten (10) feet of the levee toe, or within the projected levee section for irrigation or drainage.

(5) Watering basins around trees must be limited to a maximum depth of twelve (12) inches.

(6) Permanently installed irrigation pipes may be buried but may be no deeper than eight (8) inches into the levee slope.

(7) A readily accessible shutoff or control valve is required in the supply line of all irrigation systems. The valve must be located a minimum of ten (10) feet landward of the levee toe and must be clearly identified for levee maintenance or flood fight personnel.

(8) Pipes supplying water to permanently installed sprinkler heads must be of approved material such as galvanized iron, schedule 40 polyvinyl chloride (PVC), class L copper, or equivalent. Aluminum pipe is not permitted.

(k) The board may permit, with appropriate conditions, existing nonconforming vegetation after considering a number of factors, including but not limited to:

(1) Age of vegetation;

(2) Type of vegetation;

(3) Location of vegetation;

(4) Size of vegetation;

(5) Physical condition of vegetation;

(6) Whether the vegetation was planted or is naturally occurring;

(7) Condition of the adopted plan of flood control;

(8) Environmental value of the vegetation; and

(9) Ability to inspect and maintain the levee around the vegetation.

(l) Trees removed from the levee and from within ten (10) feet of the levee shall have all roots larger than one- and one-half (1-1/2) inches in diameter removed for a distance of at least three (3) feet from the tree trunk at ground level and the hole filled with impervious soil compacted in four- (4) to six- (6) inch lifts. Compaction within the levee section shall be a relative compaction of not less than ninety percent (90%), per ASTM D1557-91, dated 1991, which is incorporated by reference. Outside of the levee section, the soil shall be compacted to at least the density of adjacent undisturbed material.

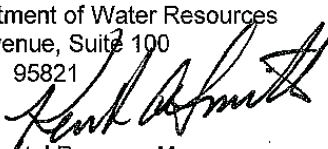
State of California
Department of Fish and Game



M e m o r a n d u m

Date: December 22, 2009

To: Jeff Schuette
California Department of Water Resources
33 El Camino Avenue, Suite 100
Sacramento, CA 95821

From: Jeff Drongesen 
Acting Environmental Program Manager
Department of Fish and Game
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Subject: Small Erosion Repair Program

The Department of Fish and Game (DFG) has reviewed the Notice of Preparation of a draft Environmental Impact Report (EIR) for the Small Erosion Repair Program (SERP) (SCH #2009112088). The project would provide a streamlined program for the California Department of Water Resources (DWR) to identify, obtain regulatory authorization for, and construct small levee repairs on levees maintained by DWR within the Sacramento River Flood Control Project (SRFCP). The initial focus (Phase 1) of the SERP approximately 306 miles of levees represents an initial 5-year effort. After the phase 1 implementation period, the Interagency Flood Management Collaborative Program Group (Interagency Collaborative Group) intends to evaluate the program's success and, if warranted, the SERP may be expanded in the future to include sides repaired by the local maintaining agencies throughout the Sacramento-San Joaquin drainage district. Phase 1 of the project will directly affect approximately 306 miles of levees on 14 associated waterways in the counties of Butte, Colusa, Glenn, Sutter, and Yuba.

Significant natural resources of the project consist of special-status plant, animal and aquatic species, State Species of Special Concern, State Fully Protected Species, riparian habitats and associated upland habitat. The EIR should discuss and provide mitigation for the following:

1. The project's impact upon fish and wildlife and their habitat. The EIR should contain information about the amounts and kinds of habitat present on each project site and how these habitats will be affected.
2. The project's impact upon significant habitat such as wetlands and riparian areas. The project should be designed so that impacts to wetlands are avoided. Mitigation should be provided for unavoidable impacts based upon the concept of no-net-loss of wetland habitat values or acreage.
3. The project's impact to special status species including species which are State and federal listed as rare, threatened and endangered, State Species of Special Concern and Fully Protected Species.
4. The project's growth inducing and cumulative impacts upon fish, wildlife, water quality and vegetative resources.

5. The EIR should provide an analysis of specific alternatives which reduce impacts to fish, wildlife, water quality and vegetative resources.
6. The EIR should contain an evaluation of the proposed projects consistency with the related and applicable land use plans, such as General Plans, Specific Plans, Watershed Master Plans, Habitat Conservation Plans, Natural Community Conservation Plans, as well as, existing Army Corps permits or Fish and Wildlife Service Biological Opinions.
7. The EIR should contain an evaluation of direct and indirect impacts of each site where work shall be performed, including the levee and stream reconstruction and restoration, all equipment, spoils or revetment materials storage and staging areas, with a disclosure of trip routes and project construction timing and duration.
8. The EIR should provide methods for analyzing how a proposed design will provide a cumulative net benefit to fish and wildlife resources and habitat for native species.
9. The EIR should consider and analyze whether the implementation of the proposed project will jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species.

The EIR should consider and analyze whether implementation of the proposed project will result in reasonably foreseeable, potentially significant impacts subject to regulation by the DFG under section 1600 et seq. of the Fish and Game Code. In general, such impacts result whenever a proposed project involves work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel, including ephemeral streams and water courses. Impacts triggering regulation by the DFG under these provisions of the Fish and Game Code typically result from activities that:

- Divert, obstruct, or change the natural flow or the bed, channel or bank of a river, stream, or lake;
- Use material from a streambed; or
- Result in the disposal or deposition of debris, waste, or other material where it may pass into a river stream, or lake.

In the event implementation of the proposed project involves such activities, and those activities will result in reasonably foreseeable substantial adverse effects on fish or wildlife, a Lake or Streambed Alteration Agreement (LSAA) will be required by the DFG. Because issuance of a LSAA is subject to review under the California Environmental Quality Act (CEQA), the SEIR should analyze whether the potentially feasible mitigation measures set forth below will avoid or substantially reduce impacts requiring a LSAA from the DFG.

1. Protection and maintenance of the riparian, wetland, stream or lake systems to ensure a "no-net-loss" of habitat value and acreage. Vegetation removal should not exceed the minimum necessary to complete operations.
2. Provisions for the protection of fish and wildlife resources at risk that consider various life stages, maintain migration and dispersal corridors, and protect essential breeding (i.e. spawning, nesting) habitats.

3. Delineation of buffers along streams and wetlands to provide adequate protection to the aquatic resource. No grading or construction activities should be allowed within these buffers.
4. Placement of construction materials, spoils or fill, so they cannot be washed into a stream or lake.
5. Prevention of downstream sedimentation and pollution. Provisions may include but not be limited to oil/grit separators, detention ponds, buffering filter strips, silt barriers, etc., to prevent downstream sedimentation and pollution.
6. Restoration plans must include performance standards such as the types of vegetation to be used, the timing of implementation, and contingency plans if the replanting is not successful. Restoration of disturbed areas should utilize native vegetation.

Finally, in the event implementation of the proposed project will involve activities and impacts requiring a LSAA, please contact the North Central Region for a notification packet and fee schedule for a LSAA.

This project will have an impact to fish and/or wildlife habitat. Assessment of fees under Public Resources Code Section 21089 and as defined by Fish and Game Code Section 711.4 is necessary. Fees are payable by the project applicant upon filing of the Notice of Determination by the lead agency.

Pursuant to Public Resources Code Sections 21092 and 21092.2, the DFG requests written notification of proposed actions and pending decisions regarding this project. Written notifications should be directed to this office.

Thank you for the opportunity to review this project. If the DFG can be of further assistance please contact Jenny Marr, Staff Environmental Scientist, at (530) 895-4267 or Jeff Drongesen, Acting Environmental Program Manager, at (916) 358-2919.

Sincerely,

Jeff Drongesen.
Acting Environmental Program Manager

cc: Joe R. Johnson, NCR
Michael Healey, NCR
Gary Hobgood, NCR
DFG North Central Region

Jenny Marr
Department of Fish and Game
1100 Fortress Street Suite 2
Chico, CA 95973

DEPARTMENT OF TRANSPORTATION

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December 2, 2009

Small Erosion Repair Program
SCH#2009112088

Mr. Jeff Schuette
California Department of Water Resources
3310 El Camino Avenue, Suite 100
Sacramento, CA 95821

Dear Mr. Schuette:

Thank you for the opportunity to review and comment on the NOP for an Environmental Impact Report and Initial Study for the Small Erosion Repair Program, which will provide a streamlined program to construct small levee repairs on levees maintained by the Department of Water Resources in Butte, Colusa, Glenn, Sutter, and Yuba counties. Caltrans has the following comments:

All work proposed and performed within the State right-of-way must be in accordance with Caltrans' standards and require a Caltrans Encroachment Permit prior to commencing construction, surveying or other activities in the right-of-way. For more information on encroachment permits, the requirements, and an application form, please visit our web page at www.dot.ca.gov/doingbusiness and click on "Encroachment Permits" or contact the Caltrans District 3, Office of Permits at (530) 741-4403.

If you have questions or need additional information, please contact Rupinder Jawanda, Butte County IGR Coordinator, at (530) 740-4989 or e-mail at rupinder_jawanda@dot.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sukhvinder Takhar'.

SUKHVINDER (SUE) TAKHAR, Chief
Office of Transportation Planning – North

"Caltrans improves mobility across California"

CALIFORNIA STATE LANDS COMMISSION
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PAUL D. THAYER, Executive Officer
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December 15, 2009

File Ref: SCH# 2009112088

Jeff Schuette
California Department of Water Resources
Division of Flood Management
3310 El Camino Ave, Suite 100
Sacramento, CA 95821

Subject: Soil Erosion Repair Program (SERP) for Sites on Levees within the Sacramento River Flood Control Project Area Notice of Preparation/Initial Study (NOP/IS)

Dear Mr. Schuette:

The California State Lands Commission (CSLC) staff has reviewed the Notice of Preparation/Initial Study (NOP/IS) dated November 25, 2009, for preparation of a Draft Environmental Impact Report, addressing the proposed Soil Erosion Repair Program (SERP) for Sites on Levees within the Sacramento River Flood Control Project Area. For this project, the CSLC is both a Responsible and a Trustee agency.

As general background, the State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes of waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation and open space. The State owns sovereign fee title to tide and submerged lands landward to the mean high tide line (MHTL) as they existed in nature, prior to fill or artificial accretions. On navigable non-tidal waterways, the State holds fee ownership of the bed landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, as they last naturally existed. The State's sovereign interests are under the jurisdiction of the CSLC.

The current project is to address improving up to 306 miles of federal flood protection levees within the northern portion of the California Central Valley. The improvements will increase the level of flood protection within the Central Valley Flood Protection Board's (CVFPB) jurisdiction. A CVFPB encroachment permit may be required

as well as a geotechnical evaluation of the proposed project locations. Placing rock riprap within the channels of the Sacramento River channel will require coordination with the CVFPB, as well as with the US Army Corps of Engineers (US ACE) to alter Federal flood protection levees (33 USC 408). Additional coordination with the CVFPB and the US ACE may include working within the established flood season windows. Precaution and planning may be required to prevent possible liquefaction of levees as heavy equipment traverses the prism face. Additional coordination with the US ACE may be required to determine the appropriate plant species type or seed mixture composition consistent with the US ACE's guidelines for planting vegetation along levee surfaces.

Additional permits may be required to conduct the proposed levee repairs and include: US Army Corps of Engineers (USACE, section 408, 404, and Section 10 of the Safe Rivers and Harbors Act); the California Department of Fish and Game (CDFG, Section 1600), and the Regional Water Quality Control Board (RWQCB, Section 401). Regional and county permitting jurisdictions may include Air Quality Management Districts or Air Pollution Control Districts.

Improvements to the levee system will result in disturbance and potential loss of riparian habitat. These impacts, along with those proposed for other levee system enhancements in the Sacramento Valley, will result in a cumulative loss of riparian vegetation and shaded riverine aquatic habitat along the river bank, which will be difficult to mitigate and may result in secondary impacts to the listed runs of salmonids and listed avian species. The CSLC recommends that the California Department of Water Resources (CA DWR) work very closely with the resources agencies (i.e., CDFG, U.S. Fish and Wildlife Service (USFWS), and NOAA Fisheries) and with local representatives of adjoining landowners (such as the Sacramento River Conservation Area Forum) to address these cumulative impacts and to design appropriate mitigation/conservation measures. Other types of mitigation, such as avoidance, both in time and space (such as construction work windows), will also need to be considered.

Queries of the Natural Diversity Database (CNDDDB) and the USFWS Special Status Species Database as well as onsite biological surveys should be conducted to identify any special-status plant or wildlife species that may occur in the region and onsite. A discussion of their potential for occurrence on the project site or in the project area should be included in the DEIR. Identification of Federal Endangered species should initiate a formal consultation under section 7 of the Federal Endangered Species Act (ESA). This evaluation should include habitat within the proposed construction footprint and adjacent locations. Under the California ESA, the CDFG may require coordination for the incidental take of any endangered species under sections 2080.1 and 2081 of the California Fish and Game Code. Additional preconstruction surveys should be conducted to ensure the presence or absence of listed species.

One of the major stressors of the Sacramento River system is introduced species. Therefore, the DEIR should consider a range of prevention programs for terrestrial and aquatic invasive species (including quarantine, early detection, and early response) to

slow the introduction of invasive species, such as the Quagga mussel, into high demand and sensitive areas. As part of the alternatives analysis, the design of the proposed project should take into consideration the current and proposed aquatic invasive species (AIS) prevention programs. For example the Clean Water Act's (CWA) section 404 program requires specific action with regard to AIS. In addition, in light of the recent decline of pelagic organisms and in order to protect at-risk fish species, the DEIR should examine the objectives of the project and determine if the project would favor non-native fisheries within the Sacramento River.

An evaluation of the noise and vibration impacts on fish and birds from construction activities in the water, on the levees and land-side supporting structures of the Sacramento River and flood control facilities should be included in the DEIR. Mitigation measures may be needed that would include species-specific work windows as defined by CDFG, USFWS, and NOAA Fisheries. Additional concern and precaution should be taken to ensure any construction activities do not increase the chances of levee liquefaction or sloughing. Any excessive vibration to the levee section should be evaluated to ensure safety and stability of the levee system.

Any construction activities along the water-side bank should consider water quality issues, such as increased turbidity and sedimentation, and make all the necessary arrangements to reduce or mitigate for these concerns. These activities should be coordinated with the respective regulatory agency, USACE or RWQCB.

An evaluation of potential submerged cultural resources in the project area will need to be undertaken. Any submerged archaeological site or submerged historic resource remaining in state waters for more than 50 years is presumed to be significant. The title to all abandoned shipwrecks and all archaeological sites and historic or cultural resources on or in the tide and submerged lands of California is vested in the state and under the jurisdiction of the CSLC. The CSLC maintains a shipwrecks database of known and potential vessels located on the state's tide and submerged lands; however, the location of many shipwrecks remains unknown. The recovery of objects from any submerged archaeological site or shipwreck requires a salvage permit under Public Resources Code (PRC) section 6309. On statutorily granted tide and submerged lands, a permit may be issued only after consultation with the local grantee and a determination by the CSLC that the proposed salvage operation is consistent with the purposes of the legislative grant. A Code of Federal Regulations section 106 evaluation should be made, as well, to determine any potential terrestrial cultural resources in the project areas where construction can occur.

Greenhouse gas emissions information consistent with the California Global Warming Solutions Act (AB 32) should be included in the DEIR. This would include a determination of the greenhouse gases that will be emitted as a result of construction and ongoing maintenance of the levee system, a determination of the significance of those impacts, and mitigation measures to reduce any impacts found to be significant. The CSLC recommends evaluating the cumulative effect resulting from generation of GHG emissions. Staff also suggests using a recognized air quality analysis program such as

the URBEMIS program or the Linear Construction Model program for evaluating construction related air quality discharges. These cumulative discharges will potentially result in impacts which will need to be mitigated.

An evaluation of the temporary and permanent loss of recreation resources as well as public access in the specific areas during the construction of the Sacramento River levee and flood control facilities improvements should be included in the DEIR. These impacts should include mitigation measures, including alternative public access points, for the residents and tourists of the area.

The DEIR should discuss the potential changes and impacts to current transportation routes into and out of areas during construction. Once again, these impacts should include mitigation measures for the residents and tourists of the area.

The proposed project involves many sites which have not as yet been identified. Therefore, to the extent any of the proposed levee repairs are located waterward of the ordinary high water mark on sovereign lands that are subject to tidal action, or are located waterward of the ordinary low water mark on navigable non-tidal waterways, a lease from the Commission will be required. Once the proposed sites are identified, please contact Diane Jones at 916-574-1843 or by email at jonesd@slc.ca.gov to determine if a lease is required.

As a responsible agency, the CSLC will need to rely on this document for the issuance of a lease, and therefore, we hope that you consider our comments during preparation of the DEIR. For questions and comments related to the environmental review, please contact Christopher Huitt at (916) 574-1938 or by e-mail at huittc@slc.ca.gov. If you have any questions involving the Shipwreck and Historic Maritime Resources Program please contact Staff Counsel Pam Griggs at (916) 574-1854 or by email at griggsp@slc.ca.gov.

Sincerely,



Marina R. Brand, Acting Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
Diane Jones, CSLC
Chris Huitt, CSLC